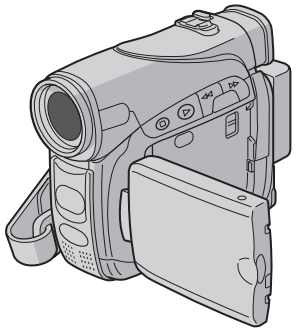
JVC

SERVICE MANUAL

DIGITAL VIDEO CAMERA

GR-D260EK, GR-D270EW, GR-D273AG, GR-D280EX, GR-D293AG



Mini DV PAL

SD

MultiMediaCard

GR-D260EKM[M5D2S4],
GR-D270EWM,GR-D273AGM[M5D2S5],
GR-D280EXM[M5D2S6],GR-D293AGM[M5D2S7]

For disassembling and assembling of MECHANISM ASSEMBLY, refer to the SERVICE MANUAL No.86700(MECHANISM ASSEMBLY).
Regarding service information other than these sections, refer to the service manual No. YF080 (GR-D290EX).
Also, be sure to note important safety precautions provided in the service manual.

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No.YF086
2005/4

SPECIFICATION

■Camcorder

For General	Power supply		DC 11.0 V(Using AC Adapter) DC 7.2 V (Using battery pack)
	Power consumption		Approx. 3.2 W (3.5 W*) (LCD monitor off, viewfinder on) Approx. 4.2 W (4.5 W*) (LCD monitor on, viewfinder off) * Using LED Light
	Dimensions (W × H × D)		56 mm × 94 mm × 112 mm (with the LCD monitor closed and the viewfinder pushed back in, without ring of the lens)
	Weight		Approx. 430g (without battery, cassette, memory card and lens cap) Approx. 510 g (incl. battery, cassette, memory card and lens cap)
	Operating temperature		0°C to 40°C
	Operating humidity		35% to 80%
	Storage temperature		-20°C to 50°C
	Pickup		1/6" CCD
	Lens		F 1.8, f = 2.2 mm to 55 mm, 10:1 power zoom lens
	Filter diameter		Ø27 mm (When attaching an optional conversion lens or filter, remove the ring of the lens.)
	LCD monitor		2.5" diagonally measured, LCD panel/TFT active matrix system
	Viewfinder		Electronic viewfinder with 0.16" color LCD
	Speaker		Monaural
	LED Light		Effective distance: 1.5 m
For Digital Video Camera	Format		DV format (SD mode)
	Signal format		PAL standard
	Recording/Playback format	Video	Digital component recording
		Audio	PCM digital recording, 32 kHz 4-channel (12-bit), 48 kHz 2-channel (16-bit)
	Cassette		Mini DV cassette
	Tape speed		SP: 18.8 mm/s, LP: 12.5 mm/s
	Maximum recording time (using 80 min. cassette)		SP: 80 min., LP: 120 min.
For Digital Still Camera	Storage media		SD Memory Card/MultiMediaCard
	Compression system		JPEG (compatible)
	File size		Still image : 2 modes (1024 × 768 pixels/640 × 480 pixels) Moving image:1 mode (160 × 120 pixels)
	Picture quality		2 modes (FINE/STANDARD)
For Connectors	S	S-Video input	Y: 0.8 V to 1.2 V (p-p), 75Ω , analogue C: 0.2 V to 0.4 V (p-p), 75Ω , analogue
		S-Video output	Y: 1.0 V (p-p), 75Ω, analogue C: 0.29 V (p-p), 75Ω, analogue
	AV	Video input	0.8 V to 1.2 V (p-p), 75Ω, analogue
		Video output	1.0 V (p-p), 75Ω, analogue
		Audio input	300 mV (rms), 50 kΩ , analogue, stereo
		Audio output	300 mV (rms), 1 kΩ, analogue, stereo
	Microphone	input	Ø3.5 mm, stereo
	DV	Input/output	4-pin, IEEE 1394 compliant
	USB		Mini USB-B type, USB 1.1/2.0 (Full speed for GR-D270, High speed for GR-D290) compliant

■AC Adapter

Power requirement	AC 110 V to 240 V, 50 Hz/60 Hz
Output	DC 11 V, 1 A

Specifications shown are for SP mode unless otherwise indicated. E & O.E. Design and specifications subject to change without notice.

SECTION 1
PRECAUTION

Please refer to "GR-D290EX No.YF080" about this section.

SECTION 2
SPECIFIC SERVICE INSTRUCTIONS

2.1 DIFFERENCE LIST

The following table indicate main different points between models GR-D290EX, GR-D260EK, GR-D270EW, GR-D273AG, GR-D280EX and GR-D293AG.

MODEL	GR-D290EX	GR-D260EK	GR-D270EW	GR-D273AG	GR-D280EX	GR-D293AG
DSC FLASH MEMORY (MEMORY CARD)	YES (MMC/8MB)	YES (MMC/8MB)	NO	NO	NO	YES (MMC/8MB)
ANALOG INPUT	YES	NO	YES	YES	NO	YES
DV TERMINAL	YES(IN/OUT)	YES(OUT)	YES(IN/OUT)	YES(IN/OUT)	YES(OUT)	YES(IN/OUT)
AC ADAPTER	AP-V17E	AP-V14E	AP-V17E	AP-V17E	AP-V17E	AP-V17E
AC CORD	NO	YES(BS Plug)	NO	NO	NO	NO
MEMORY CARD	YES	YES	NO	NO	NO	YES
PERI-RCA ADAPTER	YES	YES	YES	NO	YES	NO

SECTION 3
DISASSEMBLY

Please refer to "GR-D290EX No.YF080" about this section.

SECTION 4
ADJUSTMENT

Please refer to "GR-D290EX No.YF080" about this section.

SECTION 5
TROUBLESHOOTING

Please refer to "GR-D290EX No.YF080" about this section.

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(No.YF086)

Printed in Japan
VPT

PARTS LIST

SAFETY PRECAUTION

Parts identified by the ⚠ symbol are critical for safety. Replace only with specified part numbers.

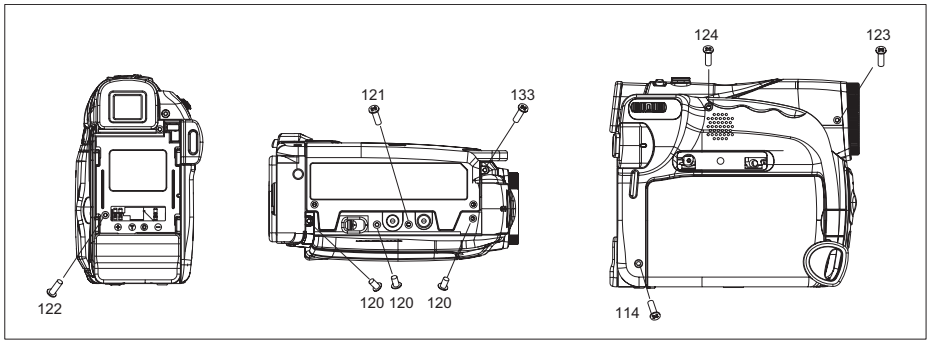
BEWARE OF BOGUS PARTS

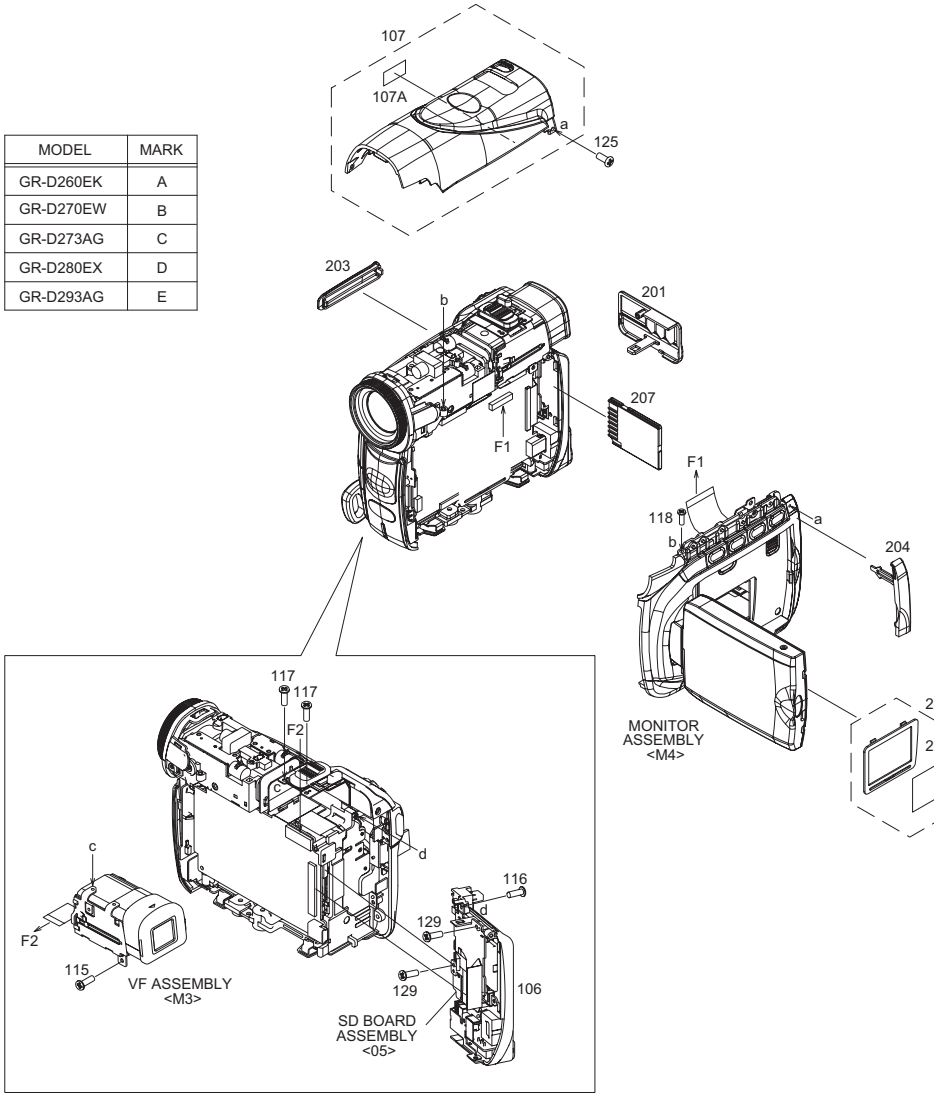
Parts that do not meet specifications may cause trouble in regard to safety and performance. We recommend that genuine JVC parts be used.

1. EXPLODED VIEW

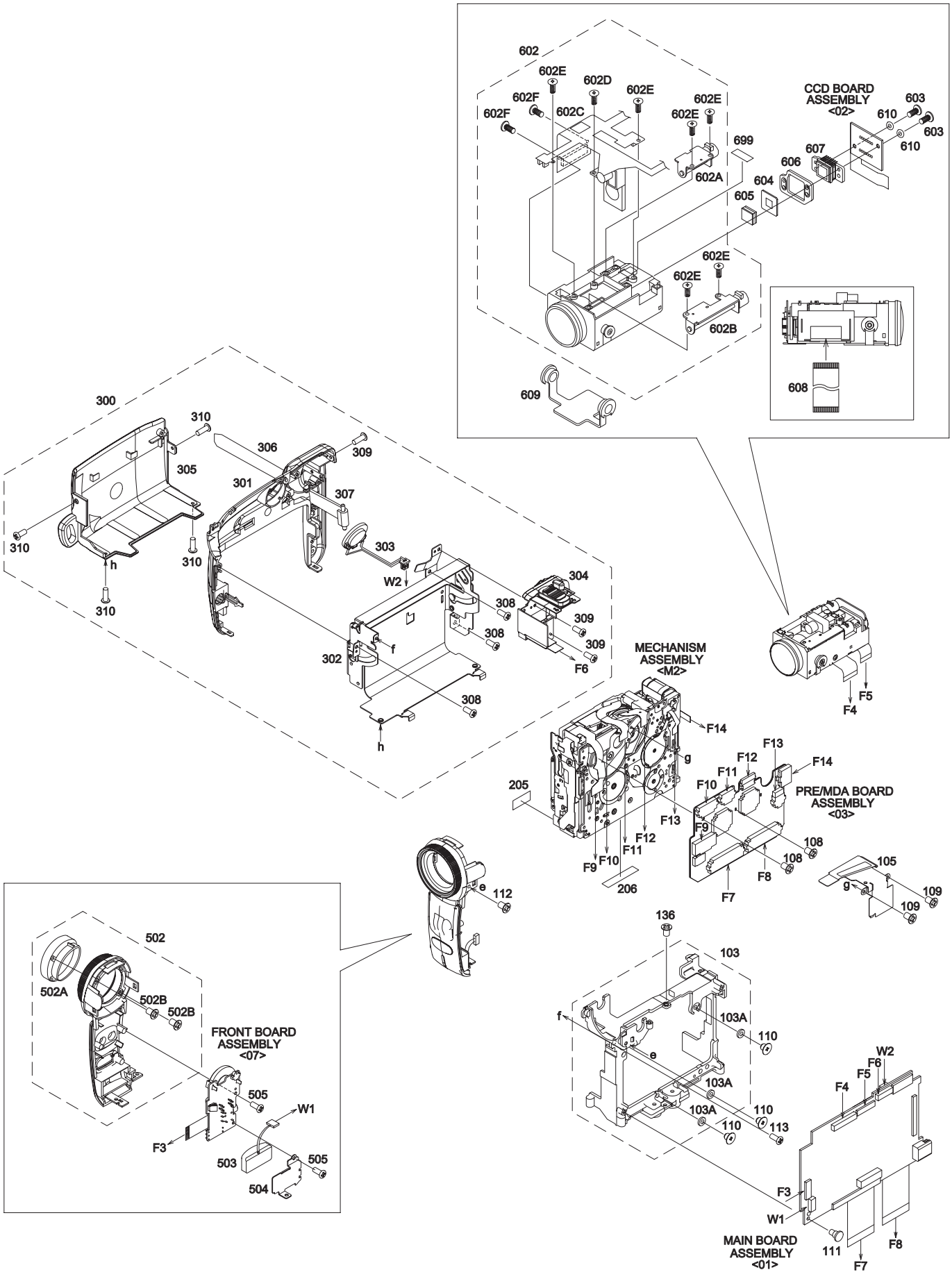
1.1 FINAL ASSEMBLY<M1>

The instruction manual to be provided with this product will differ according to the destination.





MODEL	MARK
GR-D260EK	A
GR-D270EW	B
GR-D273AG	C
GR-D280EX	D
GR-D293AG	E


602
602E
602D
602E
602F
602F
602C
602E
602E
602A
699
CCD BOARD
ASSEMBLY
<02>
603
610
603
610
607
606
604
605
602E
602E
602B
609
608
300
310
306
309
305
301
307
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310
310
303
W2
304
308
309
308
309
302
F6
308
h
f
h
MECHANISM
ASSEMBLY
<M2>
F5
F4
F14
g
F13
F12
F14
F11
205
F10
PRE/MDA BOARD
ASSEMBLY
<03>
F13
F12
F11
F9
F10
F9
108
108
F8
F7
206
105
g
109
109
e
112
136
103
f
103A
110
e
103A
103A
110
110
113
W2
F6
F5
F4
F3
W1
MAIN BOARD
ASSEMBLY
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F8
F7
502
502A
502B
502B
FRONT BOARD
ASSEMBLY
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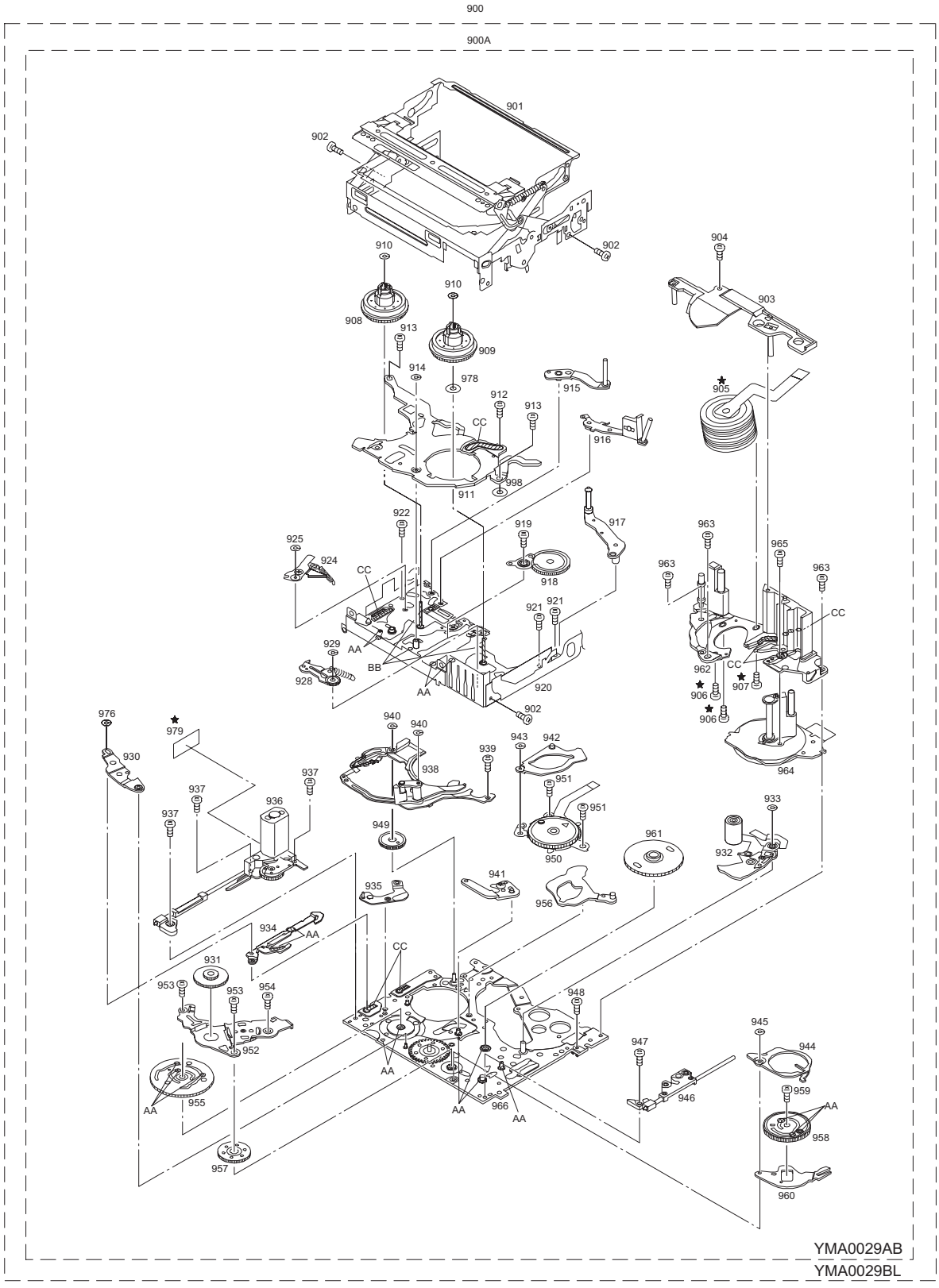
505
W1
F3
503
505
504

1.2 MECHANISM ASSEMBLY<M2>

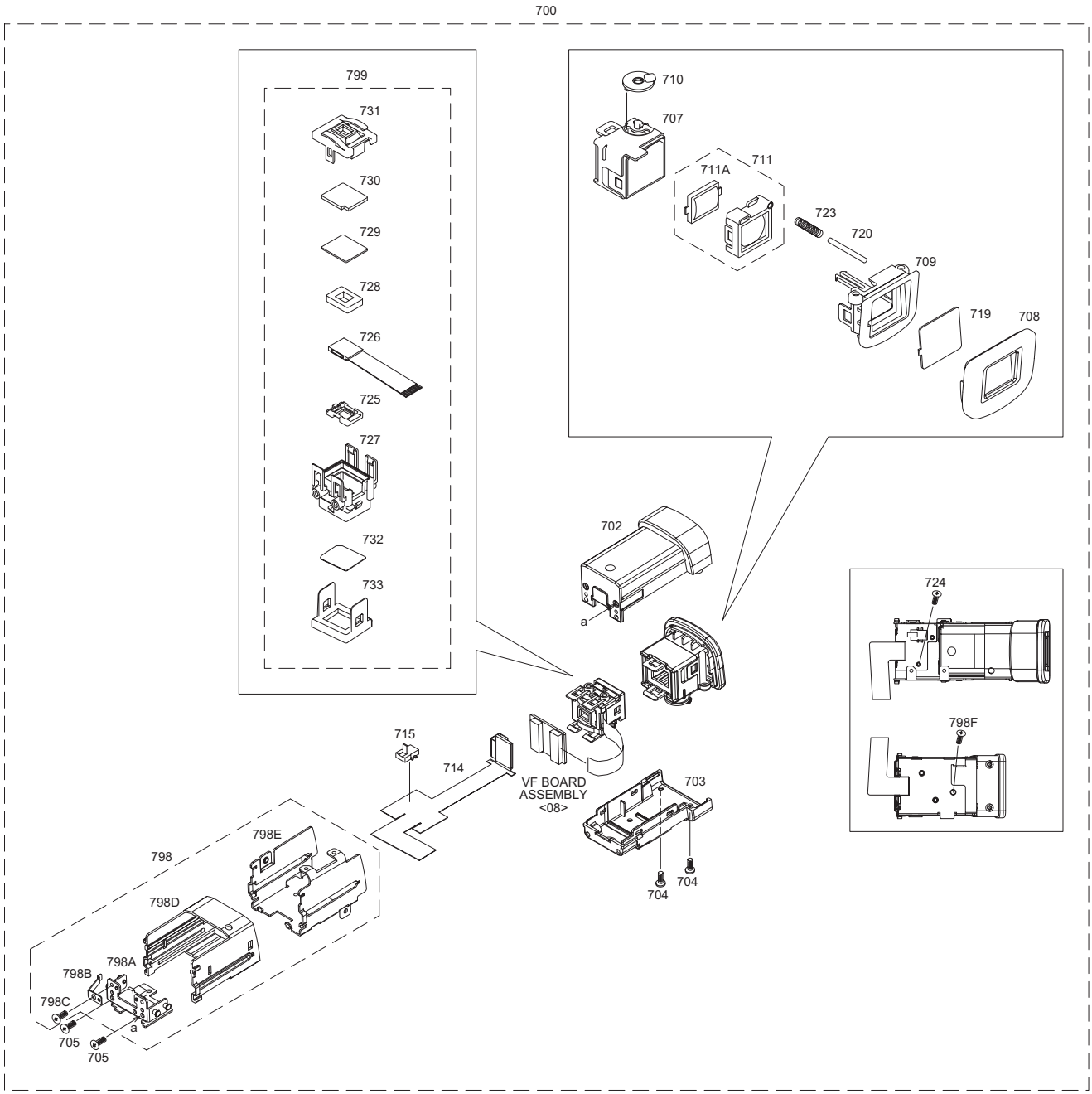


Classification	Part No.	Symbol in drawing
Grease	KYODO-SH-JB	AA
Oil	YTU94027	BB
Grease	JVS-306U	CC

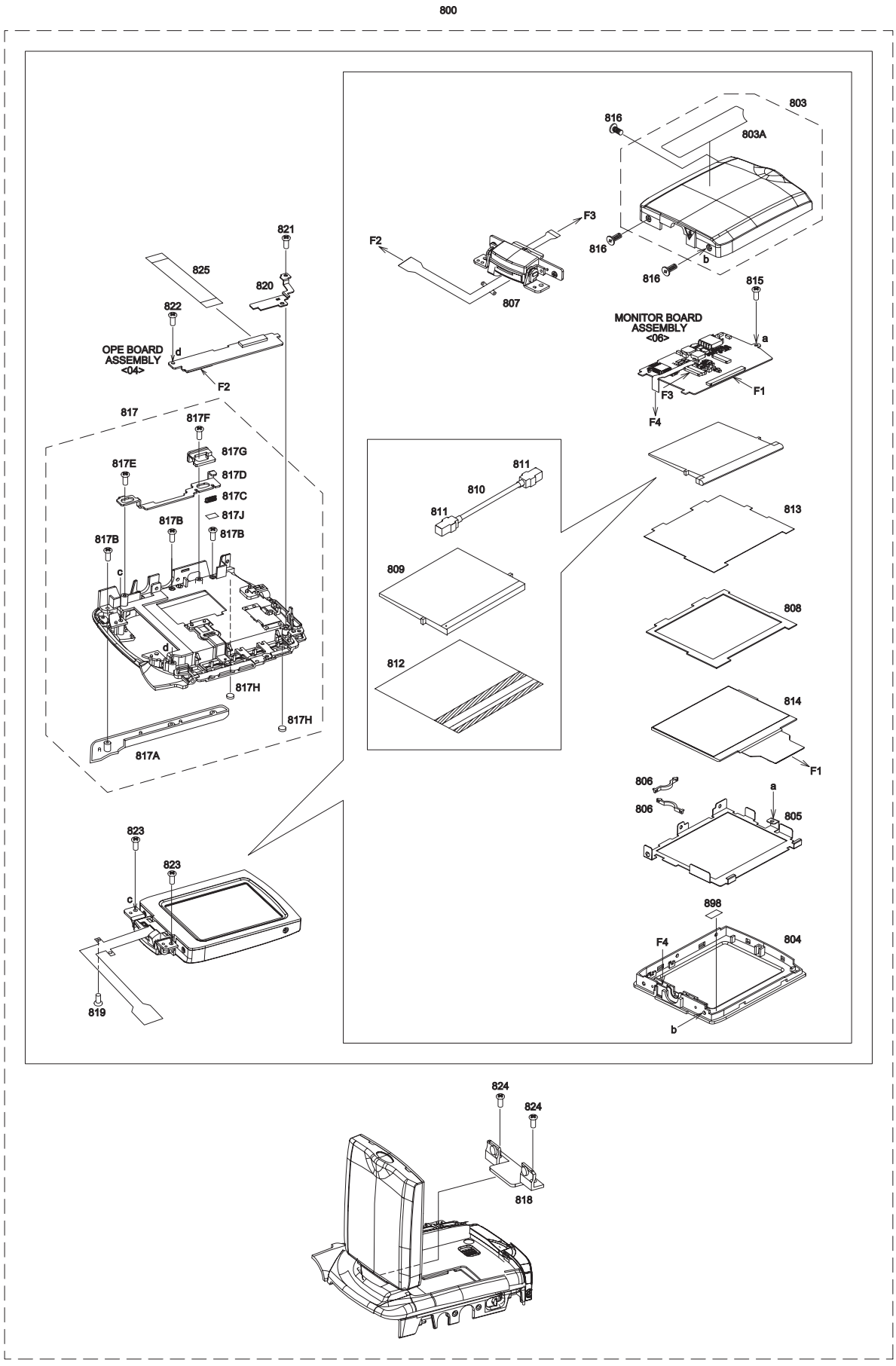
NOTE1: The section marked in AA, BB and CC indicate lubrication and greasing areas.

NOTE2: Mark ★ is not contained in 900A.

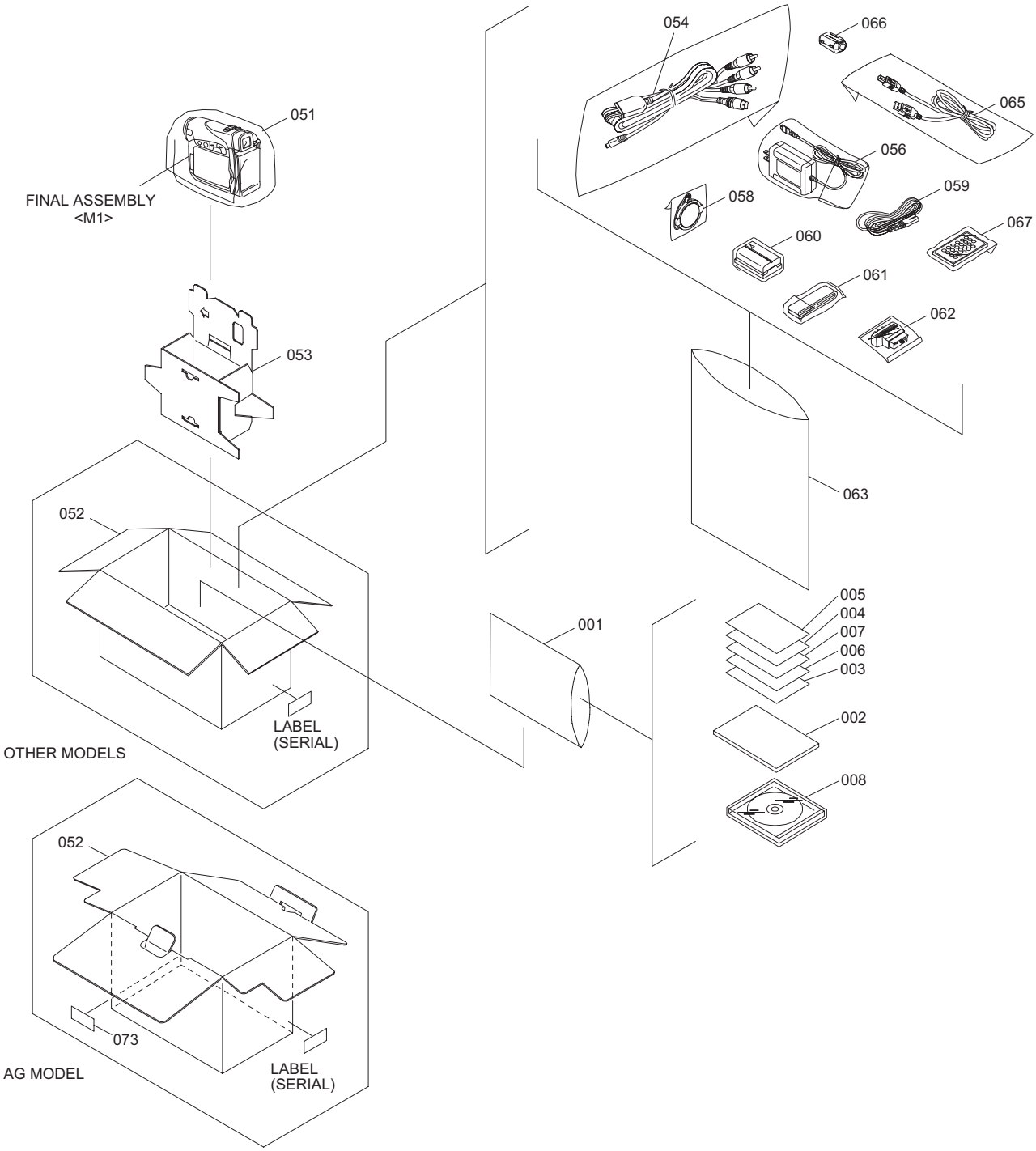
1.3 VF(COLOR) ASSEMBLY <M3>



1.4 MONITOR ASSEMBLY <M4>



1.5 PACKING AND ACCESSORY ASSEMBLY <M5>



MODEL	MARK	MODEL	MARK
GR-D260EK	A	GR-D280EX	D
GR-D270EW	B	GR-D293AG	E
GR-D273AG	C		

2. PARTS LIST

FINAL ASSEMBLY <M1>

⚠ Symbol No.	Part No.	Part Name	Description	Local
103	LY34543-001D	FRAME(Z27)ASSY		A,B,D
103	LY34543-001C	FRAME(Z27)ASSY		C,E
103A	LY45033-001A	BUSH	(x3)	
105	LY34542-001A	S.COVER(PR)		
⚠ 106	LY21323-003J	REAR UNIT		
107	LY34567-002E	T.COVER ASSY		B
107	LY34567-001F	T.COVER ASSY		A,D
107	LY34567-007B	T.COVER ASSY		C,E
107A	LY30034-0C6A	SPACER(A)		A,C,D,E
108	LY30031-015A	SPECIAL SCREW	MC-PRE/MDA(x2)	
109	LY30031-015A	SPECIAL SCREW	MCHA-SHLD(x2)	
110	LY30032-002A	SPECIAL SCREW	FRM-MCA(x3)	
111	LY30031-0H2B	SPECIAL SCREW	FRM-MAIN	
112	LY30031-0H2B	SPECIAL SCREW	FRM-FRONT	
113	LY30031-0D4A	SPECIAL SCREW	FRM-BKT(AR)	
114	LY30031-0D4A	SPECIAL SCREW	LOWER-REAR	
115	LY30031-0H2B	SPECIAL SCREW	FRM-VF	
116	LY30031-0H2B	SPECIAL SCREW	FRM-REAR	
117	LY30031-0H5A	SPECIAL SCREW	VF-ZOOM(x2)	
118	LY30031-0H2B	SPECIAL SCREW	FRM-UPPER	
120	LY30031-0J3A	SPECIAL SCREW	FRM-UPPER(x3)	
121	LY30031-0J3A	SPECIAL SCREW	BK(HNG)-UP	
122	LY30031-008A	SPECIAL SCREW	UPPER-REAR	
123	LY30031-0H2B	SPECIAL SCREW	FRM-TOP	
124	LY30031-0D5A	SPECIAL SCREW	VF-TOP	
125	LY30031-008A	SPECIAL SCREW	REAR-TOP	
129	LY30031-003A	SPECIAL SCREW	FOR SD PWB(x2)	
133	LY30031-0J3A	SPECIAL SCREW	LOWER-FRM	
136	LY30031-071A	SPECIAL SCREW	FRM-SHLD	
201	LY34552-001B	JACK COVER(REAR)		
202	LY44931-002D	COVER(JIG)ASSY		
202A	LY34661-001B	C.LABEL(VF)		
203	LY34569-001D	COVER(ADJUST)		
204	LY34557-001B	COVER(SD) ASSY		
205	LY40699-002A	LABEL(PUSH)		
206	LY32001-004A	LABEL(HOUSING)		
207	QAM0467-002	MEMORY CARD	MMC 8MB	A,E
300	LU05D203A	LOWER UNIT ASSY	JAPAN	A,B,D
300	LU05D204A	LOWER UNIT ASSY	JAPAN	C,E
301	LY21345-002E	LOWER CASE ASSY		A,B,D
301	LY21345-003A	LOWER CASE ASSY		C,E
302	LY34540-001F	ARM ASSY		
303	QAS0284-001	SPEAKER		
304	LY10548-001D	ZOOM UNIT		
305	LY10549-001C	CASSETTE COVER		
306	LY21320-001B	GRIP BELT		
307	LY44829-001B	SHAFT(G.BELT)		
308	LY30031-008A	SPECIAL SCREW	LOWER-ARM(x3)	
309	LY30031-008A	SPECIAL SCREW	LOWER-ZOOM(x3)	
310	LY30031-0H5A	SPECIAL SCREW	C.COV-ARM(x4)	
502	LY34545-001G	F.COVER ASSY		
502A	LY34546-001A	HOOD(SCREW)		
502B	LY30031-034A	SPECIAL SCREW	(x2)	
503	LY34598-001A	MIC		
504	LY34551-001B	PLATE(MIC)		
505	LY30031-003A	SPECIAL SCREW	(x2)	
602	LY34620-001B	OP BLOCK ASSY		
602A	PTY34620-002	FOCUS MOTOR UNIT		
602B	PTY34620-001	ZOOM MOTOR UNIT		
602C	PTY34620-006	AUTO IRIS UNIT		
602D	PTY34620-535	TAP SCREW		
602E	PTY34620-530	TAP SCREW	(x6)	
602F	PTY34620-525	TAP SCREW	(x2)	
603	LY30031-038A	TAP SCREW	(x2)	
604	LY44893-001A	SHEET		
605	LY44927-001A	O.LPF		
606	LY34628-001A	SPACER		
607	LYH30605-001A	CCD BASE ASSY		
608	QUQ105-2404BA-E	FFC WIRE	24pin 4cm	
609	LY44831-001A	BUSH(OP)		
610	LY44159-001A	WASHER	(x2)	
699	LY30034-0S1A	SPACER(A)		

MECHANISM ASSEMBLY <M2>

⚠ Symbol No.	Part No.	Part Name	Description	Local
900	YMA0029BL	MECHA(A)ASSY	Y/E Y08247	
900A	YMA0029AB	MECHA(A)ASSY	JVM/BJVC	
901	LY32870-001Q	CASSETTEHOUSING ASSY		
902	LY43675-008A	MINI SCREW	(x3)	
903	LYH30420-001A	UPPER BASE ASSY		
904	QYSPSPU1425MA	SCREW	M1.4 x 2.5mm	
905	YDV2102G	DRUM ASSY	M/B SET022	
906	LY44533-001A	DAMP.SCREW ASSY	JVM/BJVC(x2)	
907	LY44533-002A	DAMP.SCREW ASSY		
908	LY31538-001G	REEL DISK ASSY		
909	LY31538-002J	REEL DISK ASSY		
910	YQ44246	SLIT WASHER	(x2)	
911	LY10372-001K	REEL COVER ASSY		
912	LY42120-002B	MINI SCREW		
913	LY41945-003B	MINI SCREW	(x2)	
914	YQ44246	SLIT WASHER		
915	LY43725-001G	TENSION ARM ASSY		
916	LYH40269-001A	SLANT POLE ARM ASSY		
917	LY43731-001G	TAKE UP ARM ASSY		
918	LY31531-001E	SWING ARM ASSY		
919	YQ43893-9	MINI SCREW		
920	LYH30424-001A	SLIDE DECK FINAL ASSY		
921	YQ43893	MINI SCREW	(x2)	
922	LY43023-001A	MINI SCREW		
924	LYH30419-001A	PAD ARM ASSY		
925	YQ44246	SLIT WASHER		
928	LYH40270-001A	TAKE UP BRAKE ASSY		
929	YQ44246	SLIT WASHER		
930	LY43684-001C	TENSION CONTROL LEVER ASSY		
931	LY32861-001B	CENTER GEAR		
932	LY31516-001J	PINCH ROLLER ARM FINAL ASSY		
933	YQ44246	SLIT WASHER		
934	LY43681-001B	TENSION CONTROL PLATE ASSY		
935	LY43687-001A	BRAKE CONTROL LEVER ASSY		
936	LYH30421-001A	MOTOR BRACKET ASSY		
937	YQ43893	MINI SCREW	(x3)	
938	LYH30422-001A	GUIDE RAIL ASSY		
939	YQ43893	MINI SCREW		
940	YQ44246	SLIT WASHER	(x2)	
941	LY32843-001J	SLIDE LEVER2 ASSY		
942	LY43690-001C	LOADING PLATE ASSY		
943	YQ44246	SLIT WASHER		
944	LY32858-001B	EJECT LEVER		
945	YQ44246	SLIT WASHER		
946	LYH40271-001A	BASE R ASSY		
947	YQ43893	MINI SCREW		
948	LY41945-001C	MINI SCREW		
949	LY43665-001A	MODE GEAR		
950	QSW0876-005	ROTARY ENCODER		
951	YQ43893	MINI SCREW	(x2)	
952	LY32860-001E	GEAR COVER ASSY		
953	YQ43893	MINI SCREW	(x2)	
954	LY43675-007A	MINI SCREW		
955	LY43676-001B	MAIN CAM ASSY		
956	LY41941-001B	SLIDE ARM ASSY		
957	LY43678-001A	CONNECT GEAR 2		
958	LY43679-001C	SUB CAM ASSY		
959	LY42120-001B	MINI SCREW		
960	LY43692-001B	CONTROL ARM ASSY		
961	LY32859-001B	REEL GEAR 1		
962	LY31508-003G	DRUM BASE ASSY		
963	LY43675-006C	MINI SCREW	(x3)	
964	QAR0156-002	CAPSTAN MOTOR		
965	YQ43893	MINI SCREW		
966	LY10367-001N	MAIN DECK ASSY		
976	YQ44246	SLIT WASHER		
978	LY44609-001A	WASHER		
979	LY44502-001A	SPACER	JVM/BJVC	
998	QYWFM163013	WASHER	3mm/1.6mm x 0.13mm	

MODEL	MARK	MODEL	MARK
GR-D260EK	A	GR-D280EX	D
GR-D270EW	B	GR-D293AG	E
GR-D273AG	C		

VF(COLOR) ASSEMBLY <M3>

⚠ Symbol No.	Part No.	Part Name	Description	Local
700	VU05D201A	VF UNIT ASSY	JAPAN	
702	LY21328-001C	U.CASE(VF)		
703	LY21329-001D	B.CASE(VF)		
704	LY30031-008A	SPECIAL SCREW	B.CASE/U.C(x2)	
705	LY30031-008A	SPECIAL SCREW	B.CASE/H.L(x2)	
707	LY21332-001C	GUIDE(LENS)		
708	LY34589-001B	EYE CUP		
709	LY21333-001C	HOLDER(EYE)		
710	LY34593-001C	LEVER(VF)		
711	LY44841-001D	LENS ASSY		
711A	LY34592-001C	LENS HOLDER		
714	QAL0660-002	FPC		
715	NSW0245-001X	LEVER SWITCH		
719	LY44843-001B	SHEET(LENS)		
720	LY44847-001A	SHAFT(VF)		
723	LY30002-055A	COMPRESSION SPRING		
724	LY30031-0H5A	SPECIAL SCREW	SW PWB	
725	LY34584-001A	GUIDE(LCD)		
726	QLD0356-001	LCD MODULE		
727	LY21330-001B	HOLDER(LCD)		
728	LY44848-001B	CUSHION(LCD)		
729	LY44844-001A	SHEET(POLA.1)		
730	LY44846-001A	SHEET(DIFF)		
731	LY34590-001B	CASE(B.LIGHT)		
732	LY44845-001A	SHEET(POLA.2)		
733	LY34591-001A	STOPER(POLA)		
798	LY34947-001B	VF SLIDE ASSY		
798A	LY34597-001B	BKT(HINGE VF)ASSY		
798B	LY34596-001A	CLICK PLATE		
798C	LY30031-0H5A	SPECIAL SCREW	BKT/CLICK	
798D	LY21331-001D	GUIDE(CASE)		
798E	LY34595-001H	BKT(HOLDER)		
798F	LY30031-026A	SPECIAL SCREW		
799	LY34844-001D	LCD UNIT ASSY		

MONITOR ASSEMBLY <M4>

⚠ Symbol No.	Part No.	Part Name	Description	Local
⚠ 800	MU05D214A	M.UNIT ASSY		A
⚠ 800	MU05D210B	M.UNIT ASSY		B
⚠ 800	MU05D220A	M.UNIT ASSY		C
⚠ 800	MU05D208B	M.UNIT ASSY		D
⚠ 800	MU05D218A	M.UNIT ASSY		E
⚠ 803	LY34894-009A	M.COVER ASSY		A
⚠ 803	LY34894-006B	M.COVER ASSY		B
⚠ 803	LY34894-011A	M.COVER ASSY		C
⚠ 803	LY34894-004B	M.COVER ASSY		D
⚠ 803	LY34894-010A	M.COVER ASSY		E
803A	LY34856-004A	STICKER		A,B,C
803A	LY34856-005A	STICKER		D,E
804	LY10551-002F	MONITOR CASE		B,C
804	LY10551-001F	MONITOR CASE		A,D,E
805	LY21335-001A	S. CASE(MON)		
806	LY34585-001A	SPRING(LCD)	(x2)	
807	LY34523-002D	HINGE UNIT ASSY		B
807	LY34523-001D	HINGE UNIT ASSY		A,D
807	LY34523-003A	HINGE UNIT ASSY		C,E
808	LY44839-001B	SPACER(LCD)		
809	LY44832-001A	LIGHT SCREEN		
810	QLL0168-001	LAMP		
811	LY44850-001A	HOLDER(LAMP)	(x2)	
812	LY44833-001A	SHEET(REFLECT)		
813	LY44840-001B	DIFF.SHEET		
814	QLD0357-001	LCD MODULE		
815	LY30031-0D4A	SPECIAL SCREW	M.PWB-S.C	
816	LY30031-0D4A	SPECIAL SCREW	MCOV-MCAS(x3)	
⚠ 817	LY21324-008L	U.CASE ASSY		B
⚠ 817	LY21324-004L	U.CASE ASSY		A,D
⚠ 817	LY21324-017C	U.CASE ASSY		C,E
817A	LY34553-001C	COVER(UPPER)		
817B	LY30031-008A	SPECIAL SCREW	C.(UP)-UP(x3)	
817C	LY30002-061A	COMPRESSION SPRING		
817D	LY34583-001C	PLATE(LOCK)		
817E	LY30031-011A	SPECIAL SCREW	U-P(LOCK)	
817F	LY30032-026A	SPECIAL SCREW	U-P(LOCL)	
817G	LY34561-001C	KNOB(EJECT)		
817H	LY42350-003A	FOOT	(x2)	
817J	LY30034-0Q3A	SPACER(A)		
818	LY34563-001B	COVER(HINGE)		
819	LY30031-0H5A	SPECIAL SCREW	C(HNG)-FP	
820	LY34564-001A	BKT(OPE PWB)		
821	LY30031-008A	SPECIAL SCREW	U-BKT(OPE)	
822	LY30031-0H5A	SPECIAL SCREW	B(HNG)-OP	
823	LY30031-054A	SPECIAL SCREW	UP-HINGE(x2)	
824	LY30031-0H5A	SPECIAL SCREW	B(H)-C(H)(x2)	
825	WJT0174-001B-E	E-CARD WIRE		
898	LY30034-0S7A	SPACER(A)		

PACKING AND ACCESSORY ASSEMBLY <M5>

⚠ Symbol No.	Part No.	Part Name	Description	Local
001	LY34452-001A	POLY BAG	DOCUMENT	
⚠ 002	LYT1443-001A	INST BOOK(EN)	(ENGLISH)	A
⚠ 002	LYT1437-001A	INST BOOK(EN)	(ENGLISH)	B
⚠ 002	LYT1447-002A	INST BOOK(GE)	(GERMAN)	D
⚠ 002	LYT1447-003A	INST BOOK(FR)	(FRENCH)	D
⚠ 002	LYT1447-004A	INST BOOK(DU)	(DUTCH)	D
⚠ 002	LYT1447-005A	INST BOOK(SP)	(SPANISH)	D
⚠ 002	LYT1447-006A	INST BOOK(IT)	(ITALIAN)	D
⚠ 002	LYT1447-015A	INST BOOK(PT)	(PORTUGUESE)	D
⚠ 002	LYT1460-001B	INST BOOK(EN)	(ENGLISH)	C,E
⚠ 002	LYT1460-002B	INST BOOK(CH)	(CHINESE)	C,E
⚠ 002	LYT1460-003B	INST BOOK(AR)	(ARABIC)	C,E
⚠ 002	LYT1460-004B	INST BOOK(MA)	(HUNGARIAN)	C,E
003	LYT1356-001A	INST BOOK(SOFT.EN)	(SOFT.ENGLISH)	A,B,C
003	LYT1356-015A	INST BOOK(SOFT.CH)	(SOFT.CHINESE)	C
003	LYT1356-016A	INST BOOK(SOFT.AR)	(SOFT.ARABIC)	C
003	LYT1356-021A	INST BOOK(SOFT.MA)	(SOFT.HUNGARIAN)	C
003	LYT1387-002A	INST BOOK(SOFT.GE)	(SOFT.GERMAN)	D
003	LYT1387-003A	INST BOOK(SOFT.FR)	(SOFT.FRENCH)	D
003	LYT1387-004A	INST BOOK(SOFT.DU)	(SOFT.DUTCH)	D
003	LYT1387-005A	INST BOOK(SOFT.SP)	(SOFT.SPANISH)	D
003	LYT1387-006A	INST BOOK(SOFT.IT)	(SOFT.ITALIAN)	D
003	LYT1387-018A	INST BOOK(SOFT.PT)	(SOFT.PORTUGUESE)	D
003	LYT1387-001A	INST BOOK(SOFT.EN)	(SOFT.ENGLISH)	E
003	LYT1387-015A	INST BOOK(SOFT.CH.S)	(SOFT.SIMPLIFIED CHINESE)	E
003	LYT1387-016A	INST BOOK(SOFT.AR)	(SOFT.ARABIC)	E
003	LYT1387-021A	INST BOOK(SOFT.MA)	(SOFT.HUNGARIAN)	E
004	YU30878	REGI. CARD		A
005	LYT0194-001B	Q.CARD		A
006	LYT1412-005A	SHEET(HEAD.EKEX)		A,B,D
006	LYT1412-011A	SHEET(HEAD.AGM)		C,E
007	----------	WARRANTY CARD	BT-58003-1	B
007	----------	WARRANTY CARD	BT-54026-1	A,D
008	LY32210-0A3A	CD ROM ASSY		A,B,C
008	LY32210-0A6A	CD ROM ASSY		D,E
051	LY30023-003A	POLY BAG		
052	LY34576-010A	PACKING CASE		A,B
052	LY34953-002A	PACKING CASE		C
052	LY34576-006A	PACKING CASE		D
052	LY34953-001A	PACKING CASE		E
053	LY34578-001B	CUSHION		
054	QAM0663-001	MULTI CABLE	MULTI	
⚠ 056	LY21104-001D	AC ADAPTER	AP-V14E	A
⚠ 056	LY21343-001A	AC ADAPTER	AP-V17E	B,C,D,E
058	LY34194-001A	HOOD CAP ASSY(N)		
⚠ 059	QMPP210-190-JR	POWER CORD(EK)	1.9m BLACK	A
⚠ 060	LY34647-002B	BATTERY PACK	BN-VF707U	
061	LY21397-002A	SHOULDER STRAP		
062	QAM0302-001	ADAPTOR PLUG	PERI RCAS	A,B,D
063	QPA02503505P	POLY BAG	ACC. 25cm x 35cm	
065	QAM0538-001	USB CABLE	USB	
066	QQR0491-002	FERRITE CORE	USB TDK (BLACK)	
067	LY21186-002A	REMOTE CTL UNIT	RM-V720U	
073	LY40302-002A	LABEL		C,E

MODEL	MARK	MODEL	MARK
GR-D260EK	A	GR-D280EX	D
GR-D270EW	B	GR-D293AG	E
GR-D273AG	C		

MAIN BOARD ASSEMBLY <01>

⚠ Symbol No.	Part No.	Part Name	Description	Local
PW1	LYA10025-07G	MAIN BOARD ASSY		A
PW1	LYA10025-02H	MAIN BOARD ASSY		B
PW1	LYA10025-15G	MAIN BOARD ASSY		C
PW1	LYA10025-11D	MAIN BOARD ASSY		D
PW1	LYA10025-16D	MAIN BOARD ASSY		E
IC1001	MN103S97NNC	IC(MICRO C ROM)	MASK	B
IC1001 or	MN103SF66RNC	IC(MICRO C ROM)	FLASH	B
IC1001	MN103S97NND	IC(MICRO C ROM)	MASK	A,D
IC1001 or	MN103SF66RND	IC(MICRO C ROM)	FLASH	A,D
IC1001	MN103S97NNF	IC(MICRO C ROM)	MASK	C,E
IC1001 or	MN103SF66RNF	IC(MICRO C ROM)	FLASH	C,E
IC1002	BU3095-0FFV-X	IC	OSD KR	A,B,D
IC1002	BU3095-0EFV-X	IC	OSD AC	C,E
IC1003	SN74AHC1G00DC-X	IC		
IC1004	NJU7108F3-X	IC		
IC1004 or	TC75S56FU-X	IC		
IC1005	M95320-WDW6-X	IC		
IC1005 or	BR25C320FV-W-X	IC		
IC1006	RS5C314-X	IC		
IC1007	S-80823CNNB-G-W	IC		
IC1007 or	S-80823CNNB-G-W	IC		
IC1009	SN74AHC1G08DC-X	IC		
IC2201	AK4660VQ	IC	48P0.5	
IC3001	JCY0205	IC	BGA SOCKET	
IC3201	JCP8075	IC		
IC3701	BH7612FV-X	IC	BH7612FV-X	
IC3731	MM1504XN-X	IC		B,C,E
IC4201	HD49340NP-X	IC		
IC4202	MM1613AN-X	IC		
IC4901	JCY0214-X	IC		
IC4901 or	LY34853-001A	CSP IC ASSY		
IC4951	AN41902A	IC		
IC5501	JCY0185	IC		
IC6001	FA7725F	IC		
IC7801	AN2540FHQ	IC		
IC8001	TMS320DSC24GHKL	IC	DSC24	
IC8002	K4S643232H-UC60	IC	64MSDRAM	
IC8003	MR27T3202J0M4LA	IC(MICRO C ROM)	32M OTP	A,B
IC8003	MBPL32BM90PBC19	IC(MICRO C ROM)		C
IC8003	MBPL32BM90PBC04	IC(MICRO C ROM)		D
IC8003	MBPL32BM90PBC12	IC(MICRO C ROM)		E
IC8005	BH18FB1WG-W	IC	REG 1.8V	
IC8601	PIX-MC20	IC		D,E
Q1001	DTA114EE-X	DIGI TRANSISTOR		
Q1001 or	PDTA114EE-X	DIGI TRANSISTOR		
Q1001 or	BCR183T-X	DIGI TRANSISTOR		
Q1001 or	UN9111J-X	DIGI TRANSISTOR		
Q1002	XP03311-W	DIGI TRANSISTOR		
Q1002 or	UMC3N-W	DIGI TRANSISTOR		
Q1003	XP03311-W	DIGI TRANSISTOR		
Q1003 or	UMC3N-W	DIGI TRANSISTOR		
Q1005	XP03311-W	DIGI TRANSISTOR		
Q1005 or	UMC3N-W	DIGI TRANSISTOR		
Q1006	2SC4617/QR/-X	TRANSISTOR		
Q1006 or	BC847BT-X	TRANSISTOR		
Q1006 or	2SD2216J/QR/-X	TRANSISTOR		
Q1006 or	2SC4738/YG/-X	TRANSISTOR		
Q1007	DTC124EE-X	DIGI TRANSISTOR		
Q1007 or	PDTC124EE-X	DIGI TRANSISTOR		
Q1007 or	BCR141T-X	DIGI TRANSISTOR		
Q1007 or	UN9212J-X	DIGI TRANSISTOR		
Q1008	DTC144EE-X	DIGI TRANSISTOR		
Q1008 or	PDTC144EE-X	DIGI TRANSISTOR		
Q1008 or	BCR148T-X	DIGI TRANSISTOR		
Q1008 or	UN9213J-X	DIGI TRANSISTOR		
Q1009	DTC143XE-X	DIGI TRANSISTOR		
Q1011	DTC144EE-X	DIGI TRANSISTOR		
Q1011 or	PDTC144EE-X	DIGI TRANSISTOR		
Q1011 or	BCR148T-X	DIGI TRANSISTOR		
Q1011 or	UN9213J-X	DIGI TRANSISTOR		
Q2201	DTC144EE-X	DIGI TRANSISTOR		
Q2201 or	PDTC144EE-X	DIGI TRANSISTOR		
Q2201 or	BCR148T-X	DIGI TRANSISTOR		
Q2201 or	UN9213J-X	DIGI TRANSISTOR		
Q2202	UMX1N-W	PAIR TRANSISTOR		
Q2202 or	PUMX1-W	PAIR TRANSISTOR		
Q2202 or	BC847S-X	PAIR TRANSISTOR		
Q2202 or	XP4501-W	TRANSISTOR		
Q2401	2SC4617/RS/-X	TRANSISTOR		
Q2401 or	BC847BT-X	TRANSISTOR		
Q2401 or	2SD2216J/RS/-X	TRANSISTOR		
Q2403	2SC4617/RS/-X	TRANSISTOR		
Q2403 or	BC847BT-X	TRANSISTOR		
Q2403 or	2SD2216J/RS/-X	TRANSISTOR		
Q3001	2SC4617/RS/-X	TRANSISTOR	AREG_3V	
Q3001 or	BC847BT-X	TRANSISTOR	AREG_3V	
Q3001 or	2SD2216J/RS/-X	TRANSISTOR	AREG_3V	
Q3701	UMT1N-W	PAIR TRANSISTOR		
Q3701 or	XP4401-W	TRANSISTOR		
Q3701 or	BC856S-X	PAIR TRANSISTOR		
Q3701 or	PUMT1-W	PAIR TRANSISTOR		
Q3702	BC847PN-X	PAIR TRANSISTOR	BC847PN-X	
Q3705	UMT1N-W	PAIR TRANSISTOR		
Q3705 or	XP4401-W	TRANSISTOR		
Q3705 or	BC856S-X	PAIR TRANSISTOR		
Q3705 or	PUMT1-W	PAIR TRANSISTOR		
Q3706	DTC114EE-X	DIGI TRANSISTOR	DTC114EE-X	B,C,E
Q3706 or	BCR133T-X	DIGI TRANSISTOR		B,C,E
Q3706 or	UN9211J-X	DIGI TRANSISTOR		B,C,E
Q3706 or	PDTC114EE-X	DIGI TRANSISTOR		B,C,E
Q3707	DTC114EE-X	DIGI TRANSISTOR		B,C,E
Q3707 or	BCR133T-X	DIGI TRANSISTOR		B,C,E
Q3707 or	UN9211J-X	DIGI TRANSISTOR		B,C,E
Q3707 or	PDTC114EE-X	DIGI TRANSISTOR		B,C,E
Q3731	2SC4617/RS/-X	TRANSISTOR	2SC4617	B,C,E
Q3731 or	BC847BT-X	TRANSISTOR		B,C,E
Q3731 or	2SD2216J/RS/-X	TRANSISTOR		B,C,E
Q3733	BC847PN-X	PAIR TRANSISTOR	BC847PN-X	B,C,E
Q3734	2SC4617/RS/-X	TRANSISTOR	2SC4617	B,C,E
Q3734 or	BC847BT-X	TRANSISTOR		B,C,E
Q3734 or	2SD2216J/RS/-X	TRANSISTOR		B,C,E
Q3735	BC847PN-X	PAIR TRANSISTOR		B,C,E
Q4951	BCR133F-X	DIGI TRANSISTOR		
Q4951 or	DTC114EM-X	DIGI TRANSISTOR		
Q6101	QS6U24-W	MOS FET		
Q6103	SSM3J14T-X	MOS FET		
Q6201	QS6U24-W	MOS FET		
Q6301	QS6U24-W	MOS FET		
Q6401	QS6U24-W	MOS FET		
Q6501	SSM3J14T-X	MOS FET		
Q6502	BC856S-X	PAIR TRANSISTOR		
Q6502 or	PUMT1-W	PAIR TRANSISTOR		
Q6502 or	UMT1N-W	PAIR TRANSISTOR		
Q6502 or	XP4401-W	TRANSISTOR		
Q6503	2SC4617/RS/-X	TRANSISTOR		
Q6503 or	BC847BT-X	TRANSISTOR		
Q6503 or	2SD2216J/RS/-X	TRANSISTOR		
Q6701	SSM3J14T-X	MOS FET		
Q6702	RTF020P02-X	MOS FET		
Q6703	RTF020P02-X	MOS FET		
Q6704	2SA1577/RS/-X	TRANSISTOR		
Q6705	DTC124TE-X	DIGI TRANSISTOR		
Q7701	PUMX1-W	PAIR TRANSISTOR		
Q7701 or	BC847S-X	PAIR TRANSISTOR		
Q7701 or	UMX1N-W	PAIR TRANSISTOR		
Q7701 or	XP4501-W	TRANSISTOR		
Q7702	PUMX1-W	PAIR TRANSISTOR		
Q7702 or	BC847S-X	PAIR TRANSISTOR		
Q7702 or	UMX1N-W	PAIR TRANSISTOR		
Q7702 or	XP4501-W	TRANSISTOR		
Q7703	PUMX1-W	PAIR TRANSISTOR		
Q7703 or	BC847S-X	PAIR TRANSISTOR		
Q7703 or	UMX1N-W	PAIR TRANSISTOR		
Q7703 or	XP4501-W	TRANSISTOR		
Q7704	PUMX1-W	PAIR TRANSISTOR		
Q7704 or	BC847S-X	PAIR TRANSISTOR		
Q7704 or	UMX1N-W	PAIR TRANSISTOR		
Q7704 or	XP4501-W	TRANSISTOR		
Q7705	PUMX1-W	PAIR TRANSISTOR		
Q7705 or	BC847S-X	PAIR TRANSISTOR		
Q7705 or	UMX1N-W	PAIR TRANSISTOR		
Q7705 or	XP4501-W	TRANSISTOR		

MODEL	MARK	MODEL	MARK
GR-D260EK	A	GR-D280EX	D
GR-D270EW	B	GR-D293AG	E
GR-D273AG	C		

⚠ Symbol No.	Part No.	Part Name	Description	Local
Q7706	XP4311-W	TRANSISTOR		
Q7706 or	UMD3N-W	DIGI TRANSISTOR		
Q8002	DTA114EE-X	DIGI TRANSISTOR	DTA114EE-X	A,B,C
Q8002 or	BCR183T-X	DIGI TRANSISTOR	DTA114EE-X	A,B,C
Q8002 or	UN9111J-X	DIGI TRANSISTOR	DTA114EE-X	A,B,C
Q8002 or	PDTA114EE-X	DIGI TRANSISTOR	DTA114EE-X	A,B,C
Q8601	EMD2-W	PAIR TRANSISTOR	VBUS SW	
D101	EMZ6.8N-X	Z DIODE	(BATT/DC)	
D102	MA8068-X	Z DIODE	(BATT/DC)	
D1001	DA221-X	DIODE ARRAY		
D1001 or	MA133-X	SI DIODE		
D1002	1SS376-X	SI DIODE		
D3001	RB551V-30-X	SB DIODE	PHY VDD	
D3002	EC2C01C-TR-X	VARI CAP DIODE	FS VCO	
D3003	EC2C01C-TR-X	VARI CAP DIODE	FS VCO	
D3004	EC2C01C-TR-X	VARI CAP DIODE	MAIN VCO	
D3005	DAN222-X	SI DIODE		
D3005 or	MA132WK-X	SI DIODE		
D5501	1SS355-X	SI DIODE		
D5501 or	MA111-X	SI DIODE		
D6001	RB715W-X	SB DIODE		
D6501	RB480Y-W	SB DIODE		
D6502	RB480Y-W	SB DIODE		
D6701	RSX101VA-30-X	SB DIODE		
D6703	RSX101VA-30-X	SB DIODE		
D6801	RB551V-30-X	SB DIODE		
C101	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C103	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C1001	NDCA1HJ-7R0W	C CAPACITOR	7pF 50V J	
C1002	NDCA1HJ-7R0W	C CAPACITOR	7pF 50V J	
C1003	NDCA1HJ-100W	C CAPACITOR	10pF 50V J	
C1004	NBE20JM-226X	TA E CAPACITOR	22uF 6.3V M	
C1005	NCFA1AZ-104W	C CAPACITOR	0.1uF 10V Z	
C1006	NCFA1AZ-104W	C CAPACITOR	0.1uF 10V Z	
C1007	NCJA0JK-105W-A	C CAPACITOR	1uF 6.3V K	
C1008	NBE20JM-226X	TA E CAPACITOR	22uF 6.3V M	
C1009	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C1013	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C1014	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C1018	NCF31AZ-105X	C CAPACITOR	1uF 10V Z	
C1023	NCBA1EK-682W	C CAPACITOR	6800pF 25V K	
C1024	NCBA1EK-682W	C CAPACITOR	6800pF 25V K	
C1025	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C1029	NCFA1AZ-104W	C CAPACITOR	0.1uF 10V Z	
C1031	NCFA1AZ-104W	C CAPACITOR	0.1uF 10V Z	
C1032	NCFA1AZ-104W	C CAPACITOR	0.1uF 10V Z	
C1033	NCFA1AZ-104W	C CAPACITOR	0.1uF 10V Z	
C1034	NCFA1AZ-104W	C CAPACITOR	0.1uF 10V Z	
C1035	NCFA1AZ-104W	C CAPACITOR	0.1uF 10V Z	
C1036	NCFA1AZ-104W	C CAPACITOR	0.1uF 10V Z	
C1038	NCFA1AZ-104W	C CAPACITOR	0.1uF 10V Z	
C1039	NCFA1AZ-104W	C CAPACITOR	0.1uF 10V Z	
C1040	NCFA1AZ-104W	C CAPACITOR	0.1uF 10V Z	
C1041	NCFA1AZ-104W	C CAPACITOR	0.1uF 10V Z	
C1042	NCFA1AZ-104W	C CAPACITOR	0.1uF 10V Z	
C1044	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C1045	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C1046	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C1051	NCB31CK-223X	C CAPACITOR	0.022uF 16V K	
C1052	NCB31CK-223X	C CAPACITOR	0.022uF 16V K	
C1053	NCB31CK-223X	C CAPACITOR	0.022uF 16V K	
C1054	NCB31CK-223X	C CAPACITOR	0.022uF 16V K	
C1055	NCF31AZ-105X	C CAPACITOR	1uF 10V Z	
C2201	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C2202	NCB30JK-105X	C CAPACITOR	1uF 6.3V K	
C2203	NCB30JK-105X	C CAPACITOR	1uF 6.3V K	
C2204	NCB30JK-105X	C CAPACITOR	1uF 6.3V K	
C2205	NCB30JK-105X	C CAPACITOR	1uF 6.3V K	
C2209	NCB30JK-105X	C CAPACITOR	1uF 6.3V K	
C2210	NCB30JK-105X	C CAPACITOR	1uF 6.3V K	
C2213	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C2214	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C2217	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C2218	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C2223	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C2224	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	

⚠ Symbol No.	Part No.	Part Name	Description	Local
C2401	NBZ0015-106X	TA E CAPACITOR	10uF 6.3V M	
C2402	NBZ0015-106X	TA E CAPACITOR	10uF 6.3V M	
C2403	NBZ0015-106X	TA E CAPACITOR	10uF 6.3V M	
C2404	NBZ0015-106X	TA E CAPACITOR	10uF 6.3V M	
C2405	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C2406	NBZ0015-106X	TA E CAPACITOR	10uF 6.3V M	
C2603	NCBA1CK-223W	C CAPACITOR	0.022uF 16V K	
C2604	NCBA1CK-223W	C CAPACITOR	0.022uF 16V K	
C2605	NCBA1EK-472W	C CAPACITOR	4700pF 25V K	
C2606	NCBA1EK-472W	C CAPACITOR	4700pF 25V K	
C2609	NCBA1HK-332W	C CAPACITOR	3300pF 50V K	
C2610	NCBA1HK-332W	C CAPACITOR	3300pF 50V K	
C2611	NCB30JK-105X	C CAPACITOR	1uF 6.3V K	
C2612	NCB30JK-105X	C CAPACITOR	1uF 6.3V K	
C2613	NCB30JK-105X	C CAPACITOR	1uF 6.3V K	
C2623	NDCA1HJ-100W	C CAPACITOR	10pF 50V J	
C2624	NDCA1HJ-100W	C CAPACITOR	10pF 50V J	
C2655	NCBA1CK-473W	C CAPACITOR	0.047uF 16V K	
C2656	NCBA1CK-473W	C CAPACITOR	0.047uF 16V K	
C3001	NBE20JM-106X	TA E CAPACITOR	10uF 6.3V M	
C3002	NCB30JK-105X	C CAPACITOR	1uF 6.3V K	
C3003	NBE20JM-106X	TA E CAPACITOR	10uF 6.3V M	
C3004	NCB30JK-105X	C CAPACITOR	1uF 6.3V K	
C3005	NBE20JM-106X	TA E CAPACITOR	10uF 6.3V M	
C3006	NCB30JK-105X	C CAPACITOR	1uF 6.3V K	
C3007	NBE20JM-106X	TA E CAPACITOR	10uF 6.3V M	
C3008	NCB30JK-105X	C CAPACITOR	1uF 6.3V K	
C3009	NBE20JM-106X	TA E CAPACITOR	10uF 6.3V M	
C3010	NCB30JK-105X	C CAPACITOR	1uF 6.3V K	
C3011	NBE20JM-106X	TA E CAPACITOR	10uF 6.3V M	
C3013	NBE20JM-106X	TA E CAPACITOR	10uF 6.3V M	
C3014	NCB30JK-105X	C CAPACITOR	1uF 6.3V K	
C3016	NCB30JK-105X	C CAPACITOR	1uF 6.3V K	
C3017	NCB30JK-105X	C CAPACITOR	1uF 6.3V K	
C3018	NCB30JK-105X	C CAPACITOR	1uF 6.3V K	
C3019	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C3020	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C3021	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C3022	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C3023	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C3024	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C3025	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C3026	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C3027	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
C3029	NCBA1HK-102W	C CAPACITOR	1000pF 50V K	
C3030	NDCA1HJ-330W	C CAPACITOR	33pF 50V J	
C3031	NCBA1HK-102W	C CAPACITOR	1000pF 50V K	
C3032	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C3033	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C3034	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C3035	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C3036	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C3037	NCB31AK-334X	C CAPACITOR	0.33uF 10V K	
C3039	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C3040	NDCA1EJ-221W	C CAPACITOR	220pF 25V J	
C3046	NCB31CK-224X	C CAPACITOR	0.22uF 16V K	
C3048	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C3049	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C3050	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C3051	NDCA1HJ-470W	C CAPACITOR	47pF 50V J	
C3052	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C3053	NCBA1HK-102W	C CAPACITOR	1000pF 50V K	
C3054	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C3055	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C3056	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C3057	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C3058	NCBA1EK-472W	C CAPACITOR	4700pF 25V K	
C3059	NCB30JK-105X	C CAPACITOR	1uF 6.3V K	
C3060	NDCA1EJ-271W	C CAPACITOR	270pF 25V J	
C3061	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C3062	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C3063	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C3064	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C3065	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C3066	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C3067	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C3068	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C3069	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	

MODEL	MARK	MODEL	MARK
GR-D260EK	A	GR-D280EX	D
GR-D270EW	B	GR-D293AG	E
GR-D273AG	C		

⚠ Symbol No.	Part No.	Part Name	Description	Local
C3070	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C3071	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C3072	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C3073	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C3201	NBZ0015-106X	TA E CAPACITOR	10uF 6.3V M	
C3202	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C3203	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C3204	NBZ0015-106X	TA E CAPACITOR	10uF 6.3V M	
C3205	NBE20GM-476X	TA E CAPACITOR	47uF 4V M	
C3206	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C3207	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C3209	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C3211	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C3214	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C3216	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C3217	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C3219	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C3220	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C3221	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C3222	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C3223	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C3224	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C3225	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C3229	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C3233	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C3234	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C3701	NCB10JK-106X	C CAPACITOR	10uF 6.3V K	
C3706	NCB30JK-105X	C CAPACITOR	1uF 6.3V K	
C3708	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C3709	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C3710	NBE20GM-226X	TA E CAPACITOR	22uF 4V M	
C3711	NBE20GM-226X	TA E CAPACITOR	22uF 4V M	
C3712	NBE20GM-107X	TA E CAPACITOR	100uF 4V M	
C3713	NBE20GM-107X	TA E CAPACITOR	100uF 4V M	
C3714	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C3715	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C3731	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	B,C,E
C3732	NCBA1HK-102W	C CAPACITOR	1000pF 50V K	B,C,E
C3733	NDCA1HJ-3R0W	C CAPACITOR	3pF 50V J	B,C,E
C3734	NDCA1HJ-5R0W	C CAPACITOR	5pF 50V J	B,C,E
C3735	NDCA1HJ-330W	C CAPACITOR	33pF 50V J	B,C,E
C3736	NCBA1HK-102W	C CAPACITOR	1000pF 50V K	B,C,E
C3738	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	B,C,E
C3739	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	B,C,E
C3740	NCB30JK-105X	C CAPACITOR	1uF 6.3V K	B,C,E
C3741	NCB30JK-105X	C CAPACITOR	1uF 6.3V K	B,C,E
C3742	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	B,C,E
C3743	NDCA1HJ-3R0W	C CAPACITOR	3pF 50V J	B,C,E
C3744	NDCA1HJ-5R0W	C CAPACITOR	5pF 50V J	B,C,E
C3745	NDCA1HJ-330W	C CAPACITOR	33pF 50V J	B,C,E
C3746	NCB20JM-475X	C CAPACITOR	4.7uF 6.3V M	B,C,E
C3747	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	B,C,E
C4201	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C4202	NCB30JK-105X	C CAPACITOR	1uF 6.3V K	
C4203	NBE20JM-226X	TA E CAPACITOR	22uF 6.3V M	
C4204	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C4205	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C4206	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C4207	NCB30JK-105X	C CAPACITOR	1uF 6.3V K	
C4208	NCB31CK-105X	C CAPACITOR	1uF 16V K	
C4209	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C4210	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C4211	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C4212	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C4213	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C4214	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C4215	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C4902	NBZ0015-106X	TA E CAPACITOR	10uF 6.3V M	
C4904	NBZ0015-106X	TA E CAPACITOR	10uF 6.3V M	
C4905	NCFA1AZ-104W	C CAPACITOR	0.1uF 10V Z	
C4906	NCFA1AZ-104W	C CAPACITOR	0.1uF 10V Z	
C4907	NCFA1AZ-104W	C CAPACITOR	0.1uF 10V Z	
C4908	NCFA1AZ-104W	C CAPACITOR	0.1uF 10V Z	
C4909	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C4912	NCFA1AZ-104W	C CAPACITOR	0.1uF 10V Z	
C4913	NCFA1AZ-104W	C CAPACITOR	0.1uF 10V Z	
C4914	NDCA1HJ-680W	C CAPACITOR	68pF 50V J	
C4915	NDCA1HJ-121W	C CAPACITOR	120pF 50V J	
C4916	NCFA1AZ-104W	C CAPACITOR	0.1uF 10V Z	
C4917	NCFA1AZ-104W	C CAPACITOR	0.1uF 10V Z	
C4918	NCFA1AZ-104W	C CAPACITOR	0.1uF 10V Z	
C4921	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C4922	NCFA1AZ-104W	C CAPACITOR	0.1uF 10V Z	
C4952	NBE21AM-106X	TA E CAPACITOR	10uF 10V M	
C4954	NBE21AM-106X	TA E CAPACITOR	10uF 10V M	
C4956	NBZ0015-106X	TA E CAPACITOR	10uF 6.3V M	
C4957	NDCA1HJ-220W	C CAPACITOR	22pF 50V J	
C4958	NDCA1HJ-220W	C CAPACITOR	22pF 50V J	
C5501	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C5502	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C5503	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C5504	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C5505	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C5506	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C5507	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C5508	NBP21VM-105X	TA E CAPACITOR	1uF 35V M	
C5509	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C5510	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C5511	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C5512	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C5513	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C5514	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C5515	NBE20GM-476X	TA E CAPACITOR	47uF 4V M	
C5516	NBP41EM-475X-B	TA E CAPACITOR	4.7uF 25V M	
C5517	NBP21CM-106X	TA E CAPACITOR	10uF 16V M	
C6005	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C6006	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C6007	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C6008	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C6009	NCB31AK-224X	C CAPACITOR	0.22uF 10V K	
C6010	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C6011	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C6101	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C6102	NCB10JK-106X	C CAPACITOR	10uF 6.3V K	
C6103	NCBA1HK-221W	C CAPACITOR	220pF 50V K	
C6104	NCBA1HK-681W	C CAPACITOR	680pF 50V K	
C6105	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C6106	NCB30JK-105X	C CAPACITOR	1uF 6.3V K	
C6107	NCBA1CK-223W	C CAPACITOR	0.022uF 16V K	
C6201	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C6202	NCB10JK-106X	C CAPACITOR	10uF 6.3V K	
C6203	NCBA1HK-102W	C CAPACITOR	1000pF 50V K	
C6204	NCBA1HK-221W	C CAPACITOR	220pF 50V K	
C6301	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C6302	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C6303	NCBA1AK-683W	C CAPACITOR	0.068uF 10V K	
C6305	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C6401	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C6402	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C6403	NCB30JK-105X	C CAPACITOR	1uF 6.3V K	
C6405	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C6501	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C6502	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C6503	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C6505	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C6506	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C6508	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C6509	NCBA1AK-333W	C CAPACITOR	0.033uF 10V K	
C6510	NCBA1AK-473W	C CAPACITOR	0.047uF 10V K	
C6511	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C6512	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C6701	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C6702	NCB41CK-106X	C CAPACITOR	10uF 16V K	
C6704	NCBA1EK-472W	C CAPACITOR	4700pF 25V K	
C6705	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C6706	NCBA1HK-221W	C CAPACITOR	220pF 50V K	
C6707	NCBA1HK-821W	C CAPACITOR	820pF 50V K	
C6802	NCB10JK-106X	C CAPACITOR	10uF 6.3V K	
C6803	NCBA1HK-102W	C CAPACITOR	1000pF 50V K	
C6804	NCBA1HK-392W	C CAPACITOR	3900pF 50V K	
C7704	NCB31CK-105X	C CAPACITOR	1uF 16V K	
C7705	NCB31CK-105X	C CAPACITOR	1uF 16V K	
C7706	NBE20JM-106X	TA E CAPACITOR	10uF 6.3V M	
C7707	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C7708	NCB11CK-475X	C CAPACITOR	4.7uF 16V K	
C7709	NCB21CK-105X	C CAPACITOR	1uF 16V K	

MODEL	MARK	MODEL	MARK
GR-D260EK	A	GR-D280EX	D
GR-D270EW	B	GR-D293AG	E
GR-D273AG	C		

⚠ Symbol No.	Part No.	Part Name	Description	Local
C7710	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C7711	NCB20JK-475X	C CAPACITOR	4.7uF 6.3V K	
C7712	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C7713	NCB20JK-475X	C CAPACITOR	4.7uF 6.3V K	
C7714	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C7715	NCB20JK-475X	C CAPACITOR	4.7uF 6.3V K	
C7716	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C7718	NCB31CK-105X	C CAPACITOR	1uF 16V K	
C7719	NCB31CK-105X	C CAPACITOR	1uF 16V K	
C7720	NCB11CK-475X	C CAPACITOR	4.7uF 16V K	
C7721	NCB11CK-475X	C CAPACITOR	4.7uF 16V K	
C7801	NBE90JM-106X	TA E CAPACITOR	10uF 6.3V M	
C7802	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C7803	NBE20JM-106X	TA E CAPACITOR	10uF 6.3V M	
C7804	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C7805	NCB30JK-105X	C CAPACITOR	1uF 6.3V K	
C7806	NCB30JK-105X	C CAPACITOR	1uF 6.3V K	
C7807	NCB30JK-105X	C CAPACITOR	1uF 6.3V K	
C7812	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C7813	NCB21AK-225X	C CAPACITOR	2.2uF 10V K	
C7814	NCB21AK-225X	C CAPACITOR	2.2uF 10V K	
C7815	NCB21AK-225X	C CAPACITOR	2.2uF 10V K	
C7816	NCB30JK-225X	C CAPACITOR	2.2uF 6.3V K	
C7817	NCBA1HK-152W	C CAPACITOR	1500pF 50V K	
C8001	NBZ0015-106X	TA E CAPACITOR	10uF 6.3V M	
C8002	NBZ0015-106X	TA E CAPACITOR	10uF 6.3V M	
C8003	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C8004	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C8005	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C8006	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C8007	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C8008	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C8009	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C8010	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C8011	NBZ0015-106X	TA E CAPACITOR	10uF 6.3V M	
C8012	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C8013	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C8018	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C8021	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C8022	NBZ0015-106X	TA E CAPACITOR	10uF 6.3V M	
C8023	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C8024	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C8025	NBE20JM-106X	TA E CAPACITOR	10uF 6.3V M	
C8026	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C8027	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C8028	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C8029	NCB30JK-225X	C CAPACITOR	2.2uF 6.3V K	
C8030	NBE20JM-106X	TA E CAPACITOR	10uF 6.3V M	A,B,C
C8032	NCB30JK-225X	C CAPACITOR	2.2uF 6.3V K	A,B,C
C8032	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	D,E
C8601	NBZ0015-106X	TA E CAPACITOR	10uF 6.3V M	D,E
C8602	NBZ0015-106X	TA E CAPACITOR	10uF 6.3V M	D,E
C8603	NBZ0015-106X	TA E CAPACITOR	10uF 6.3V M	D,E
C8606	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	D,E
C8607	NCJA0JK-105W-A	C CAPACITOR	1uF 6.3V K	D,E
C8608	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	D,E
C8609	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	D,E
C8610	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	D,E
C8611	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	D,E
C8612	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	D,E
C8613	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	D,E
C8614	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	D,E
C8615	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	D,E
C8616	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	D,E
C8617	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C8618	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J	D,E
C8619	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	D,E
C8620	NCJA0JK-105W-A	C CAPACITOR	1uF 6.3V K	D,E
C8621	NDCA1HJ-7R0W	C CAPACITOR	7pF 50V J	D,E
C8622	NDCA1HJ-7R0W	C CAPACITOR	7pF 50V J	D,E
C8623	NCJA0JK-105W-A	C CAPACITOR	1uF 6.3V K	D,E
C8624	NCJA0JK-105W-A	C CAPACITOR	1uF 6.3V K	
C8626	NCB30JK-105X	C CAPACITOR	1uF 6.3V K	
C8627	NBZ0015-106X	TA E CAPACITOR	10uF 6.3V M	D,E
R101	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
R1001	NRSA6AJ-105W	MG RESISTOR	1MΩ 1/16W J	
R1002	NRSA6AJ-470W	MG RESISTOR	47Ω 1/16W J	
R1003	NRSA6AJ-104W	MG RESISTOR	100kΩ 1/16W J	
R1004	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
R1007	NRSA6AJ-104W	MG RESISTOR	100kΩ 1/16W J	
R1008	NRSA6AJ-222W	MG RESISTOR	2.2kΩ 1/16W J	
R1010	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J	
R1012	NRSA6AJ-823W	MG RESISTOR	82kΩ 1/16W J	
R1013	NRSA6AJ-623W	MG RESISTOR	62kΩ 1/16W J	
R1014	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J	
R1015	NRSA6AJ-104W	MG RESISTOR	100kΩ 1/16W J	
R1016	NRSA6AJ-104W	MG RESISTOR	100kΩ 1/16W J	
R1017	NRSA6AJ-105W	MG RESISTOR	1MΩ 1/16W J	
R1018	NRSA6AJ-104W	MG RESISTOR	100kΩ 1/16W J	
R1019	NRSA6AJ-104W	MG RESISTOR	100kΩ 1/16W J	
R1020	NRSA6AJ-753W	MG RESISTOR	75kΩ 1/16W J	
R1021	NRSA6AJ-334W	MG RESISTOR	330kΩ 1/16W J	
R1022	NRSA6AJ-332W	MG RESISTOR	3.3kΩ 1/16W J	
R1023	NRSA6AJ-332W	MG RESISTOR	3.3kΩ 1/16W J	
R1024	NRSA6AJ-332W	MG RESISTOR	3.3kΩ 1/16W J	
R1025	NRSA6AJ-473W	MG RESISTOR	47kΩ 1/16W J	
R1026	NRSA6AJ-473W	MG RESISTOR	47kΩ 1/16W J	
R1029	NRSA6AJ-152W	MG RESISTOR	1.5kΩ 1/16W J	
R1030	NRSA6AJ-273W	MG RESISTOR	27kΩ 1/16W J	
R1031	NRSA6AJ-104W	MG RESISTOR	100kΩ 1/16W J	
R1032	NRSA6AJ-104W	MG RESISTOR	100kΩ 1/16W J	
R1033	NRSA6AJ-104W	MG RESISTOR	100kΩ 1/16W J	
R1034	NRSA6AJ-104W	MG RESISTOR	100kΩ 1/16W J	
R1035	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J	
R1036	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J	
R1041	NRSA6AJ-561W	MG RESISTOR	560Ω 1/16W J	
R1043	NRSA6AJ-472W	MG RESISTOR	4.7kΩ 1/16W J	
R1044	NRSA6AJ-473W	MG RESISTOR	47kΩ 1/16W J	
R1045	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J	
R1046	NRSA6AJ-153W	MG RESISTOR	15kΩ 1/16W J	
R1047	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J	
R1048	NRSA6AJ-104W	MG RESISTOR	100kΩ 1/16W J	
R1049	NRSA6AJ-104W	MG RESISTOR	100kΩ 1/16W J	
R1050	NRSA6AJ-104W	MG RESISTOR	100kΩ 1/16W J	
R1051	NRSA6AJ-472W	MG RESISTOR	4.7kΩ 1/16W J	
R1052	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J	
R1053	NRSA6AJ-154W	MG RESISTOR	150kΩ 1/16W J	
R1054	NRSA6AJ-272W	MG RESISTOR	2.7kΩ 1/16W J	
R1055	NRSA6AJ-183W	MG RESISTOR	18kΩ 1/16W J	
R1056	NRSA6AJ-473W	MG RESISTOR	47kΩ 1/16W J	
R1057	NRSA6AJ-822W	MG RESISTOR	8.2kΩ 1/16W J	
R1059	NRSA6AJ-123W	MG RESISTOR	12kΩ 1/16W J	
R1060	NRSA6AJ-473W	MG RESISTOR	47kΩ 1/16W J	
R1061	NRSA6AJ-393W	MG RESISTOR	39kΩ 1/16W J	
R1063	NRSA6AJ-223W	MG RESISTOR	22kΩ 1/16W J	
R1064	NRSA6AJ-104W	MG RESISTOR	100kΩ 1/16W J	
R1066	NRSA6AJ-104W	MG RESISTOR	100kΩ 1/16W J	
R1067	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J	
R1068	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J	
R1069	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J	
R1070	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J	
R1071	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J	
R1072	NRSA6AJ-332W	MG RESISTOR	3.3kΩ 1/16W J	
R1073	NRSA6AJ-332W	MG RESISTOR	3.3kΩ 1/16W J	
R1074	NRSA6AJ-332W	MG RESISTOR	3.3kΩ 1/16W J	
R1075	NRSA6AJ-332W	MG RESISTOR	3.3kΩ 1/16W J	
R1076	NRSA6AJ-104W	MG RESISTOR	100kΩ 1/16W J	
R1077	NRSA6AJ-104W	MG RESISTOR	100kΩ 1/16W J	
R1078	NRSA6AJ-104W	MG RESISTOR	100kΩ 1/16W J	
R1080	NRSA6AJ-104W	MG RESISTOR	100kΩ 1/16W J	
R1081	NRSA6AJ-473W	MG RESISTOR	47kΩ 1/16W J	
R1082	NRSA6AJ-473W	MG RESISTOR	47kΩ 1/16W J	
R1083	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J	
R1085	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J	
R1086	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J	
R1089	NRSA6AJ-104W	MG RESISTOR	100kΩ 1/16W J	
R1090	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J	
R1091	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J	
R1092	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J	
R1093	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J	
R1094	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J	
R1095	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J	
R1096	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J	
R1097	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J	
R1098	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J	

MODEL	MARK	MODEL	MARK
GR-D260EK	A	GR-D280EX	D
GR-D270EW	B	GR-D293AG	E
GR-D273AG	C		

⚠ Symbol No.	Part No.	Part Name	Description	Local
R1099	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J	
R1100	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J	
R1103	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J	
R1104	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J	
R1105	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J	
R1106	NRSA6AJ-104W	MG RESISTOR	100kΩ 1/16W J	
R1110	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J	
R1112	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J	
R1117	NRSA6AJ-330W	MG RESISTOR	33Ω 1/16W J	
R1118	NRSA6AJ-104W	MG RESISTOR	100kΩ 1/16W J	
R1119	NRSA6AJ-104W	MG RESISTOR	100kΩ 1/16W J	
R1120	NRSA6AJ-104W	MG RESISTOR	100kΩ 1/16W J	
R1121	NRSA6AJ-104W	MG RESISTOR	100kΩ 1/16W J	
R1122	NRSA6AJ-104W	MG RESISTOR	100kΩ 1/16W J	
R1123	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
R1124	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
R1125	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
R1126	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
R1127	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
R1128	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
R1132	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J	
R1146	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J	
R1147	NRSA6AJ-334W	MG RESISTOR	330kΩ 1/16W J	
R1148	NRSA6AJ-224W	MG RESISTOR	220kΩ 1/16W J	
R2201	NRSA6AJ-224W	MG RESISTOR	220kΩ 1/16W J	
R2202	NRSA6AJ-564W	MG RESISTOR	560kΩ 1/16W J	
R2203	NRSA6AJ-393W	MG RESISTOR	39kΩ 1/16W J	
R2204	NRSA6AJ-154W	MG RESISTOR	150kΩ 1/16W J	
R2206	NRSA6AJ-333W	MG RESISTOR	33kΩ 1/16W J	
R2207	NRSA6AJ-333W	MG RESISTOR	33kΩ 1/16W J	
R2208	NRSA6AJ-223W	MG RESISTOR	22kΩ 1/16W J	
R2209	NRSA6AJ-223W	MG RESISTOR	22kΩ 1/16W J	
R2210	NRSA6AJ-821W	MG RESISTOR	820Ω 1/16W J	
R2211	NRSA6AJ-821W	MG RESISTOR	820Ω 1/16W J	
R2212	NRSA6AJ-2R7W	MG RESISTOR	2.7Ω 1/16W J	
R2213	NRSA6AJ-2R7W	MG RESISTOR	2.7Ω 1/16W J	
R2217	NRSA6AJ-100W	MG RESISTOR	10Ω 1/16W J	
R2231	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J	
R2233	NRSA6AJ-564W	MG RESISTOR	560kΩ 1/16W J	
R2234	NRSA6AJ-564W	MG RESISTOR	560kΩ 1/16W J	
R2235	NRSA6AJ-332W	MG RESISTOR	3.3kΩ 1/16W J	
R2401	NRSA6AJ-472W	MG RESISTOR	4.7kΩ 1/16W J	
R2402	NRSA6AJ-472W	MG RESISTOR	4.7kΩ 1/16W J	
R2403	NRSA6AJ-183W	MG RESISTOR	18kΩ 1/16W J	
R2407	NRSA6AJ-100W	MG RESISTOR	10Ω 1/16W J	
R2601	NRSA6AJ-222W	MG RESISTOR	2.2kΩ 1/16W J	
R2602	NRSA6AJ-222W	MG RESISTOR	2.2kΩ 1/16W J	
R2607	NRSA6AJ-222W	MG RESISTOR	2.2kΩ 1/16W J	
R2608	NRSA6AJ-222W	MG RESISTOR	2.2kΩ 1/16W J	
R2609	NRSA6AJ-223W	MG RESISTOR	22kΩ 1/16W J	
R2610	NRSA6AJ-223W	MG RESISTOR	22kΩ 1/16W J	
R2618	NRSA6AJ-682W	MG RESISTOR	6.8kΩ 1/16W J	
R2619	NRSA6AJ-682W	MG RESISTOR	6.8kΩ 1/16W J	
R3001	NRSA6AJ-222W	MG RESISTOR	2.2kΩ 1/16W J	
R3002	NRSA6AJ-222W	MG RESISTOR	2.2kΩ 1/16W J	
R3004	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J	
R3005	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J	
R3006	NRSA6AJ-222W	MG RESISTOR	2.2kΩ 1/16W J	
R3008	NRSA6AJ-224W	MG RESISTOR	220kΩ 1/16W J	
R3009	NRSA6AJ-224W	MG RESISTOR	220kΩ 1/16W J	
R3010	NRSA6AJ-822W	MG RESISTOR	8.2kΩ 1/16W J	
R3011	NRSA6AJ-332W	MG RESISTOR	3.3kΩ 1/16W J	
R3012	NRSA6AJ-821W	MG RESISTOR	820Ω 1/16W J	
R3013	NRSA6AJ-332W	MG RESISTOR	3.3kΩ 1/16W J	
R3014	NRSA6AJ-821W	MG RESISTOR	820Ω 1/16W J	
R3020	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	D,E
R3021	NRSA6AJ-822W	MG RESISTOR	8.2kΩ 1/16W J	
R3022	NRSA6AJ-822W	MG RESISTOR	8.2kΩ 1/16W J	
R3025	NRSA6AJ-121W	MG RESISTOR	120Ω 1/16W J	
R3026	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J	
R3028	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
R3029	NRSA6AJ-224W	MG RESISTOR	220kΩ 1/16W J	
R3030	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J	
R3031	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J	
R3032	NRSA6AJ-392W	MG RESISTOR	3.9kΩ 1/16W J	
R3033	NRSA6AJ-392W	MG RESISTOR	3.9kΩ 1/16W J	
R3034	NRSA6AD-560W	MG RESISTOR	56Ω 1/16W D	
R3035	NRSA6AD-560W	MG RESISTOR	56Ω 1/16W D	
R3036	NRSA6AD-560W	MG RESISTOR	56Ω 1/16W D	
R3037	NRSA6AD-560W	MG RESISTOR	56Ω 1/16W D	
R3038	NRSA6AD-512W	MG RESISTOR	5.1kΩ 1/16W D	
R3040	NRSA6AJ-242W	MG RESISTOR	2.4kΩ 1/16W J	
R3043	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
R3045	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
R3051	NRSA6AJ-101W	MG RESISTOR	100Ω 1/16W J	
R3054	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
R3055	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
R3056	NRSA6AJ-683W	MG RESISTOR	68kΩ 1/16W J	
R3057	NRSA6AJ-683W	MG RESISTOR	68kΩ 1/16W J	
R3058	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
R3059	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
R3060	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J	
R3063	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
R3064	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
R3065	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	D,E
R3066	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J	
R3067	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	D,E
R3068	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
R3069	NRSA6AJ-470W	MG RESISTOR	47Ω 1/16W J	
R3070	NRSA6AJ-470W	MG RESISTOR	47Ω 1/16W J	
R3071	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
R3072	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
R3073	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
R3074	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
R3076	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
R3078	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
R3081	NRSA6AJ-100W	MG RESISTOR	10Ω 1/16W J	
R3082	NRSA6AJ-100W	MG RESISTOR	10Ω 1/16W J	
R3083	NRSA6AJ-100W	MG RESISTOR	10Ω 1/16W J	
R3084	NRSA6AJ-100W	MG RESISTOR	10Ω 1/16W J	
R3085	NRSA6AJ-100W	MG RESISTOR	10Ω 1/16W J	
R3089	NRSA6AJ-100W	MG RESISTOR	10Ω 1/16W J	
R3090	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
R3092	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
R3093	NRSA6AJ-822W	MG RESISTOR	8.2kΩ 1/16W J	
R3094	NRSA6AJ-563W	MG RESISTOR	56kΩ 1/16W J	
R3095	NRSA6AJ-563W	MG RESISTOR	56kΩ 1/16W J	
R3201	NRSA6AJ-101W	MG RESISTOR	100Ω 1/16W J	
R3202	NRSA6AD-183W	MG RESISTOR	18kΩ 1/16W D	
R3203	NRSA6AD-123W	MG RESISTOR	12kΩ 1/16W D	
R3204	NRSA6AD-821W	MG RESISTOR	820Ω 1/16W D	
R3205	NRSA6AD-821W	MG RESISTOR	820Ω 1/16W D	
R3207	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
R3212	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	B,C,E
R3213	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
R3214	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
R3216	NRSA6AJ-100W	MG RESISTOR	10Ω 1/16W J	
R3217	NRSA6AJ-100W	MG RESISTOR	10Ω 1/16W J	
R3701	NRSA6AD-271W	MG RESISTOR	270Ω 1/16W D	
R3703	NRSA6AJ-332W	MG RESISTOR	3.3kΩ 1/16W J	
R3704	NRSA6AD-301W	MG RESISTOR	300Ω 1/16W D	
R3707	NRSA6AD-680W	MG RESISTOR	68Ω 1/16W D	
R3708	NRSA6AD-680W	MG RESISTOR	68Ω 1/16W D	
R3709	NRSA6AD-680W	MG RESISTOR	68Ω 1/16W D	
R3710	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
R3712	NRSA6AJ-105W	MG RESISTOR	1MΩ 1/16W J	
R3713	NRSA6AJ-104W	MG RESISTOR	100kΩ 1/16W J	
R3714	NRSA6AJ-823W	MG RESISTOR	82kΩ 1/16W J	
R3715	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J	
R3718	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
R3722	NRSA6AD-151W	MG RESISTOR	150Ω 1/16W D	
R3724	NRSA6AJ-472W	MG RESISTOR	4.7kΩ 1/16W J	
R3725	NRSA6AD-151W	MG RESISTOR	150Ω 1/16W D	
R3726	NRSA6AJ-472W	MG RESISTOR	4.7kΩ 1/16W J	
R3727	NRSA6AJ-472W	MG RESISTOR	4.7kΩ 1/16W J	
R3728	NRSA6AD-151W	MG RESISTOR	150Ω 1/16W D	
R3730	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	A
R3730	NRSA6AJ-472W	MG RESISTOR	4.7kΩ 1/16W J	B,C,D,E
R3731	NRSA6AJ-472W	MG RESISTOR	4.7kΩ 1/16W J	B,C,E
R3732	NRSA6AJ-101W	MG RESISTOR	100Ω 1/16W J	B,C,E
R3733	NRSA6AD-561W	MG RESISTOR	560Ω 1/16W D	B,C,E
R3734	NRSA6AJ-822W	MG RESISTOR	8.2kΩ 1/16W J	B,C,E
R3735	NRSA6AD-182W	MG RESISTOR	1.8kΩ 1/16W D	B,C,E
R3736	NRSA6AJ-183W	MG RESISTOR	18kΩ 1/16W J	B,C,E
R3737	NRSA6AJ-183W	MG RESISTOR	18kΩ 1/16W J	B,C,E
R3738	NRSA6AJ-681W	MG RESISTOR	680Ω 1/16W J	B,C,E

MODEL	MARK	MODEL	MARK
GR-D260EK	A	GR-D280EX	D
GR-D270EW	B	GR-D293AG	E
GR-D273AG	C		

⚠ Symbol No.	Part No.	Part Name	Description	Local
R3739	NRSA6AJ-821W	MG RESISTOR	820Ω 1/16W J	B,C,E
R3740	NRSA6AJ-821W	MG RESISTOR	820Ω 1/16W J	B,C,E
R3741	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J	B,C,E
R3744	NRSA6AD-561W	MG RESISTOR	560Ω 1/16W D	B,C,E
R3745	NRSA6AD-152W	MG RESISTOR	1.5kΩ 1/16W D	B,C,E
R3746	NRSA6AJ-222W	MG RESISTOR	2.2kΩ 1/16W J	B,C,E
R3747	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J	B,C,E
R3748	NRSA6AJ-474W	MG RESISTOR	470kΩ 1/16W J	B,C,E
R4201	NRSA6AJ-333W	MG RESISTOR	33kΩ 1/16W J	
R4202	NRSA6AJ-100W	MG RESISTOR	10Ω 1/16W J	
R4203	NRSA6AJ-100W	MG RESISTOR	10Ω 1/16W J	
R4204	NRSA6AJ-100W	MG RESISTOR	10Ω 1/16W J	
R4901	NRSA6AJ-243W	MG RESISTOR	24kΩ 1/16W J	
R4902	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J	
R4903	NRSA6AJ-822W	MG RESISTOR	8.2kΩ 1/16W J	
R4904	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J	
R4905	NRSA6AJ-153W	MG RESISTOR	15kΩ 1/16W J	
R4906	NRSA6AJ-684W	MG RESISTOR	680kΩ 1/16W J	
R4907	NRSA6AJ-105W	MG RESISTOR	1MΩ 1/16W J	
R4908	NRSA6AJ-472W	MG RESISTOR	4.7kΩ 1/16W J	
R4909	NRSA6AJ-105W	MG RESISTOR	1MΩ 1/16W J	
R4910	NRSA6AJ-101W	MG RESISTOR	100Ω 1/16W J	
R4911	NRSA6AJ-101W	MG RESISTOR	100Ω 1/16W J	
R4912	NRSA6AJ-101W	MG RESISTOR	100Ω 1/16W J	
R4917	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J	
R4918	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J	
R4923	NRSA6AJ-123W	MG RESISTOR	12kΩ 1/16W J	
R4924	NRSA6AJ-123W	MG RESISTOR	12kΩ 1/16W J	
R4935	NRSA6AJ-104W	MG RESISTOR	100kΩ 1/16W J	
R4944	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
R4945	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J	
R4951	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J	
R4952	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J	
R4953	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J	
R4954	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J	
R4955	NRSA6AJ-101W	MG RESISTOR	100Ω 1/16W J	
R4956	NRSA6AJ-4R7W	MG RESISTOR	4.7Ω 1/16W J	
R4957	NRSA6AJ-4R7W	MG RESISTOR	4.7Ω 1/16W J	
R4959	NRSA6AJ-4R7W	MG RESISTOR	4.7Ω 1/16W J	
R4960	NRSA6AJ-4R7W	MG RESISTOR	4.7Ω 1/16W J	
R4961	NRSA6AJ-271W	MG RESISTOR	270Ω 1/16W J	
R5501	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J	
R5502	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J	
R5503	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J	
R5504	NRSA6AJ-100W	MG RESISTOR	10Ω 1/16W J	
R5505	NRSA6AJ-100W	MG RESISTOR	10Ω 1/16W J	
R5506	NRSA6AJ-100W	MG RESISTOR	10Ω 1/16W J	
R5507	NRSA6AJ-100W	MG RESISTOR	10Ω 1/16W J	
R5508	NRSA6AJ-100W	MG RESISTOR	10Ω 1/16W J	
R5509	NRSA6AJ-100W	MG RESISTOR	10Ω 1/16W J	
R5510	NRSA6AJ-104W	MG RESISTOR	100kΩ 1/16W J	
R6001	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J	
R6005	NRSA6AD-303W	MG RESISTOR	30kΩ 1/16W D	
R6006	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
R6008	NRSA6AD-823W	MG RESISTOR	82kΩ 1/16W D	
R6009	NRSA6AD-333W	MG RESISTOR	33kΩ 1/16W D	
R6010	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J	
R6013	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
R6014	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
R6103	NRSA6AJ-822W	MG RESISTOR	8.2kΩ 1/16W J	
R6104	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
R6105	NRSA6AJ-123W	MG RESISTOR	12kΩ 1/16W J	
R6106	NRSA6AJ-104W	MG RESISTOR	100kΩ 1/16W J	
R6107	NRSA6AD-243W	MG RESISTOR	24kΩ 1/16W D	
R6108	NRSA6AD-363W	MG RESISTOR	36kΩ 1/16W D	
R6110	NRSA6AJ-332W	MG RESISTOR	3.3kΩ 1/16W J	
R6203	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
R6204	NRSA6AJ-822W	MG RESISTOR	8.2kΩ 1/16W J	
R6303	NRSA6AJ-104W	MG RESISTOR	100kΩ 1/16W J	
R6304	NRSA6AJ-123W	MG RESISTOR	12kΩ 1/16W J	
R6305	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J	
R6403	NRSA6AJ-273W	MG RESISTOR	27kΩ 1/16W J	
R6404	NRSA6AJ-473W	MG RESISTOR	47kΩ 1/16W J	
R6503	NRSA6AD-823W	MG RESISTOR	82kΩ 1/16W D	
R6504	NRSA6AD-823W	MG RESISTOR	82kΩ 1/16W D	
R6506	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J	
R6507	NRSA6AJ-333W	MG RESISTOR	33kΩ 1/16W J	
R6508	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J	
R6512	NRSA6AJ-473W	MG RESISTOR	47kΩ 1/16W J	
R6513	NRSA6AJ-272W	MG RESISTOR	2.7kΩ 1/16W J	
R6701	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
R6702	NRV142F-R20X	CMF RESISTOR	0.2Ω 1/4W F	
R6704	NRSA6AJ-105W	MG RESISTOR	1MΩ 1/16W J	
R6705	NRSA6AJ-105W	MG RESISTOR	1MΩ 1/16W J	
R6706	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J	
R6707	NRSA6AJ-152W	MG RESISTOR	1.5kΩ 1/16W J	
R6708	NRSA6AJ-153W	MG RESISTOR	15kΩ 1/16W J	
R6709	NRSA6AJ-114W	MG RESISTOR	110kΩ 1/16W J	
R6710	NRSA6AJ-124W	MG RESISTOR	120kΩ 1/16W J	
R6712	NRSA6AJ-561W	MG RESISTOR	560Ω 1/16W J	
R6713	NRSA6AJ-104W	MG RESISTOR	100kΩ 1/16W J	
R6714	NRSA6AJ-472W	MG RESISTOR	4.7kΩ 1/16W J	
R6715	NRSA6AD-472W	MG RESISTOR	4.7kΩ 1/16W D	
R6716	NRSA6AJ-822W	MG RESISTOR	8.2kΩ 1/16W J	
R6717	NRSA6AD-183W	MG RESISTOR	18kΩ 1/16W D	
R6718	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
R6719	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R6802	NRSA6AJ-472W	MG RESISTOR	4.7kΩ 1/16W J	
R6803	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J	
R7702	NRSA6AD-122W	MG RESISTOR	1.2kΩ 1/16W D	
R7703	NRSA6AD-823W	MG RESISTOR	82kΩ 1/16W D	
R7706	NRSA6AD-223W	MG RESISTOR	22kΩ 1/16W D	
R7707	NRSA6AD-822W	MG RESISTOR	8.2kΩ 1/16W D	
R7708	NRSA6AD-123W	MG RESISTOR	12kΩ 1/16W D	
R7709	NRSA6AD-222W	MG RESISTOR	2.2kΩ 1/16W D	
R7710	NRSA6AD-222W	MG RESISTOR	2.2kΩ 1/16W D	
R7711	NRSA6AJ-682W	MG RESISTOR	6.8kΩ 1/16W J	
R7712	NRSA6AJ-220W	MG RESISTOR	22Ω 1/16W J	
R7713	NRSA6AD-123W	MG RESISTOR	12kΩ 1/16W D	
R7714	NRSA6AD-222W	MG RESISTOR	2.2kΩ 1/16W D	
R7715	NRSA6AD-222W	MG RESISTOR	2.2kΩ 1/16W D	
R7716	NRSA6AJ-682W	MG RESISTOR	6.8kΩ 1/16W J	
R7717	NRSA6AJ-220W	MG RESISTOR	22Ω 1/16W J	
R7718	NRSA6AD-123W	MG RESISTOR	12kΩ 1/16W D	
R7719	NRSA6AD-222W	MG RESISTOR	2.2kΩ 1/16W D	
R7720	NRSA6AD-222W	MG RESISTOR	2.2kΩ 1/16W D	
R7721	NRSA6AJ-682W	MG RESISTOR	6.8kΩ 1/16W J	
R7722	NRSA6AJ-220W	MG RESISTOR	22Ω 1/16W J	
R7723	NRSA6AD-103W	MG RESISTOR	10kΩ 1/16W D	
R7724	NRSA6AD-103W	MG RESISTOR	10kΩ 1/16W D	
R7725	NRSA6AD-103W	MG RESISTOR	10kΩ 1/16W D	
R7726	NRSA6AD-103W	MG RESISTOR	10kΩ 1/16W D	
R7727	NRSA6AD-103W	MG RESISTOR	10kΩ 1/16W D	
R7728	NRSA6AD-103W	MG RESISTOR	10kΩ 1/16W D	
R7729	NRSA6AJ-124W	MG RESISTOR	120kΩ 1/16W J	
R7730	NRSA6AJ-124W	MG RESISTOR	120kΩ 1/16W J	
R7731	NRSA6AJ-124W	MG RESISTOR	120kΩ 1/16W J	
R7732	NRSA6AD-472W	MG RESISTOR	4.7kΩ 1/16W D	
R7733	NRSA6AD-203W	MG RESISTOR	20kΩ 1/16W D	
R7736	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
R7803	NRSA6AD-622W	MG RESISTOR	6.2kΩ 1/16W D	
R7804	NRSA6AD-153W	MG RESISTOR	15kΩ 1/16W D	
R7805	NRSA6AJ-101W	MG RESISTOR	100Ω 1/16W J	
R7806	NRSA6AJ-101W	MG RESISTOR	100Ω 1/16W J	
R8002	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J	
R8008	NRSA6AJ-561W	MG RESISTOR	560Ω 1/16W J	
R8009	NRSA6AJ-105W	MG RESISTOR	1MΩ 1/16W J	
R8011	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
R8012	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
R8015	NRSA6AJ-473W	MG RESISTOR	47kΩ 1/16W J	
R8016	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J	
R8017	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J	
R8019	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
R8021	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
R8022	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
R8023	NRSA6AJ-472W	MG RESISTOR	4.7kΩ 1/16W J	
R8025	NRSA6AJ-472W	MG RESISTOR	4.7kΩ 1/16W J	
R8031	NRSA6AJ-100W	MG RESISTOR	10Ω 1/16W J	
R8032	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
R8033	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R8036	NRSA6AJ-220W	MG RESISTOR	22Ω 1/16W J	
R8041	NRSA6AJ-220W	MG RESISTOR	22Ω 1/16W J	
R8042	NRSA6AJ-220W	MG RESISTOR	22Ω 1/16W J	
R8043	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
R8046	NRSA6AJ-101W	MG RESISTOR	100Ω 1/16W J	
R8050	NRSA6AJ-105W	MG RESISTOR	1MΩ 1/16W J	A,B,C

MODEL	MARK	MODEL	MARK
GR-D260EK	A	GR-D280EX	D
GR-D270EW	B	GR-D293AG	E
GR-D273AG	C		

⚠ Symbol No.	Part No.	Part Name	Description	Local
R8050	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	D,E
R8051	NRSA6AJ-105W	MG RESISTOR	1MΩ 1/16W J	A,B,C
R8051	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	D,E
R8052	NRSA6AJ-220W	MG RESISTOR	22Ω 1/16W J	A,B,C
R8053	NRSA6AJ-220W	MG RESISTOR	22Ω 1/16W J	A,B,C
R8054	NRSA6AJ-105W	MG RESISTOR	1MΩ 1/16W J	A,B,C
R8055	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	D,E
R8056	NRSA6AJ-152W	MG RESISTOR	1.5kΩ 1/16W J	A,B,C
R8602	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J	D,E
R8603	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J	D,E
R8615	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	D,E
R8618	NRSA6AJ-105W	MG RESISTOR	1MΩ 1/16W J	D,E
R8619	NRVA6AD-622W	CMF RESISTOR	6.2kΩ 1/16W D	D,E
R8621	NRSA6AJ-104W	MG RESISTOR	100kΩ 1/16W J	
R8622	NRSA6AJ-154W	MG RESISTOR	150kΩ 1/16W J	
R8623	NRSA6AJ-104W	MG RESISTOR	100kΩ 1/16W J	D,E
R8625	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	A,B,C
R8626	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	A,B,C
RA1001	NRZ0034-473W	NET RESISTOR	47kΩ 1/32W J x4	
RA1003	NRZ0034-104W	NET RESISTOR	100kΩ 1/32W J x4	
RA1004	NRZ0034-104W	NET RESISTOR	100kΩ 1/32W J x4	
RA3001	NRZ0034-100W	NET RESISTOR	10Ω 1/32W J x4	
RA3002	NRZ0034-100W	NET RESISTOR	10Ω 1/32W J x4	
RA3003	NRZ0034-100W	NET RESISTOR	10Ω 1/32W J x4	
RA3004	NRZ0034-100W	NET RESISTOR	10Ω 1/32W J x4	
RA3005	NRZ0034-100W	NET RESISTOR	10Ω 1/32W J x4	D,E
RA3006	NRZ0034-100W	NET RESISTOR	10Ω 1/32W J x4	D,E
RA3007	NRZ0034-100W	NET RESISTOR	10Ω 1/32W J x4	
RA3008	NRZ0034-100W	NET RESISTOR	10Ω 1/32W J x4	
RA3009	NRZ0034-100W	NET RESISTOR	10Ω 1/32W J x4	
RA3010	NRZ0034-100W	NET RESISTOR	10Ω 1/32W J x4	
RA3011	NRZ0034-100W	NET RESISTOR	10Ω 1/32W J x4	
RA3012	NRZ0034-103W	NET RESISTOR	10kΩ 1/32W J x4	
RA3201	NRZ0034-100W	NET RESISTOR	10Ω 1/32W J x4	
RA3202	NRZ0034-100W	NET RESISTOR	10Ω 1/32W J x4	
RA8001	NRZ0034-101W	NET RESISTOR	100Ω 1/32W J x4	
RA8002	NRZ0034-101W	NET RESISTOR	100Ω 1/32W J x4	
RA8003	NRZ0034-101W	NET RESISTOR	100Ω 1/32W J x4	
RA8004	NRZ0034-101W	NET RESISTOR	100Ω 1/32W J x4	
RA8005	NRZ0034-103W	NET RESISTOR	10kΩ 1/32W J x4	
RA8601	NRZ0034-103W	NET RESISTOR	10kΩ 1/32W J x4	D,E
RA8602	NRZ0034-103W	NET RESISTOR	10kΩ 1/32W J x4	D,E
RA8605	NRZ0034-0R0W	NET RESISTOR	0Ω 1/32W J x4	D,E
RA8606	NRZ0034-0R0W	NET RESISTOR	0Ω 1/32W J x4	D,E
L1001	NQL402M-100X	COIL	10uH M	
L1002	NQL402M-100X	COIL	10uH M	
L2401	NQL402M-100X	COIL	10uH M	
L2402	NQL402M-100X	COIL	10uH M	
L2601	NQR0269-013X	FERRITE BEADS		
L2602	NQR0269-013X	FERRITE BEADS		
L2603	NQR0269-013X	FERRITE BEADS		
L2651	NQR0269-013X	FERRITE BEADS		
L2652	NQR0269-013X	FERRITE BEADS		
L2653	NQR0269-013X	FERRITE BEADS		
L3001	NQL38DK-100X	P COIL	10uH K	
L3002	NQR0006-001X	FERRITE BEADS		
L3003	NQR0006-001X	FERRITE BEADS		
L3004	NQL38DK-100X	P COIL	10uH K	
L3005	NQR0006-001X	FERRITE BEADS		
L3007	NQR0006-001X	FERRITE BEADS		
L3008	NQL38DK-100X	P COIL	10uH K	
L3009	NQR0006-001X	FERRITE BEADS		
L3010	NQL085J-120X	COIL	12uH J	
L3012	NQL085J-2R2X	COIL	2.2uH J	
L3201	NQR0129-002X	FERRITE BEADS		
L3202	NQR0129-002X	FERRITE BEADS		
L3203	NQR0006-001X	FERRITE BEADS		
L3204	NQL38DK-100X	P COIL	10uH K	
L3701	NQL38DK-100X	P COIL	10uH K	
L3731	NQL085J-6R8X	COIL	6.8uH J	B,C,E
L3732	NQL085J-6R8X	COIL	6.8uH J	B,C,E
L4201	NQR0129-002X	FERRITE BEADS		
L4901	NQR0129-002X	FERRITE BEADS		
L4902	NQL38DK-100X	P COIL	10uH K	
L4953	NQR0129-002X	FERRITE BEADS		
L4954	NQL38DK-100X	P COIL	10uH K	
L4955	NQL38DK-100X	P COIL	10uH K	

⚠ Symbol No.	Part No.	Part Name	Description	Local
L5501	NQL38DK-100X	P COIL	10uH K	
L5502	NQR0129-002X	FERRITE BEADS		
L5503	NQR0129-002X	FERRITE BEADS		
L5504	NQR0129-002X	FERRITE BEADS		
L5505	NQL315K-100X	COIL	10uH K	
L5506	NQL315K-100X	COIL	10uH K	
L6101	NQL87EN-390X	COIL	39uH N	
L6201	NQL87EN-390X	COIL	39uH N	
L6301	NQLZ012-470X	COIL	47uH	
L6401	NQLZ012-470X	COIL	47uH	
L6501	NQL52EM-221X	COIL	220uH M	
L6502	NQL38DK-100X	P COIL	10uH K	
L6701	NQL52EM-390X	COIL	39uH M	
L6702	NQL79GM-220X	COIL	22uH M	
L6801	NQL79GM-470X	COIL	47uH M	
L7702	NQL38DK-220X	P COIL	22uH K	
L7703	NQL38DK-220X	P COIL	22uH K	
L7704	NQL38DK-220X	P COIL	22uH K	
L7801	NQL04DK-220X	COIL	22uH K	
L7802	NQL382M-220X	COIL	22uH M	
L8001	NQR0129-002X	FERRITE BEADS		
L8002	NQR0129-002X	FERRITE BEADS		
L8003	NQR0129-002X	FERRITE BEADS		
L8005	NQR0129-002X	FERRITE BEADS		
L8006	NQR0006-001X	FERRITE BEADS		
L8007	NQR0129-002X	FERRITE BEADS		
L8008	NQL402M-100X	COIL	10uH M	A,B,C
L8601	NQR0129-002X	FERRITE BEADS		
L8602	NQR0129-002X	FERRITE BEADS		D,E
L8603	NQR0006-001X	FERRITE BEADS		D,E
L8604	NQR0006-001X	FERRITE BEADS		D,E
L8606	NQL402M-100X	COIL	10uH M	D,E
L8607	NQR0129-002X	FERRITE BEADS		D,E
L8610	NQR0536-001X	CHOKE COIL		
CN101	QGF0545F1-20X	CONNECTOR	FFC/FPC (1-20)	
CN102	QGF0545F1-24X	CONNECTOR	FFC/FPC (1-24)	
CN103	QGF0545F1-17X	CONNECTOR	FFC/FPC (1-17)	
CN104	QGF0528F1-40X	CONNECTOR	PRE/MDA FFC/FPC (1-40)	
CN105	QGF0528F1-40X	CONNECTOR	PRE/MDA FFC/FPC (1-40)	
CN107	QGF0528F1-40X	CONNECTOR	JACK/DC FFC/FPC (1-40)	
CN108	QGF0543F1-16X	CONNECTOR	VF PWB FFC/FPC (1-16)	
CN109	QGF0545F1-12X	CONNECTOR	FFC/FPC (1-12)	
CN110	QGF0545F1-26X	CONNECTOR	FFC/FPC (1-26)	
CN111	QGF0543F1-12X	CONNECTOR	SD PWB FFC/FPC (1-12)	
CN112	QGA1001F1-02X	CONNECTOR	SPEAKER W-B (1-2)	
CN113	QGB0519J1-40X	CONNECTOR	JIG CN B-B (1-40)	
CN114	QGA1001F1-04X	CONNECTOR	MIC W-B (1-4)	
⚠ F6001	NMFZ007-2R5X-K	FUSE	2.5A 24V	
J101	QNZ0497-001	USB(B) CONNECTOR	USB USB(MINI-B)	
X1001	NAX0645-001X	CRYSTAL		
X1002	NAX0564-001X	CRYSTAL	32.768kHz	
X5501	NAX0587-001X	CXO	54.0000MHz	
X8001	NAX0398-001X	C OSCILLATOR	48MHZ	A,B,C
X8601	NAX0713-001X	CRYSTAL		D,E
WR1	WJT0176-001A-E	E-CARD WIRE	MAI-PRE/MD(x2)	

CCD BOARD ASSEMBLY <02>

⚠ Symbol No.	Part No.	Part Name	Description	Local
PW1	LYA20013-01B	CCD BOARD ASSY		
Q5001	2SC3931/CD/-X	TRANSISTOR		
Q5002	2SC4081/QR/-X	TRANSISTOR		
C5001	NBP41EM-475X-B	TA E CAPACITOR	4.7uF 25V M	
C5002	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C5003	NBP21CM-106X	TA E CAPACITOR	10uF 16V M	
C5004	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C5005	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C5006	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C5007	NCB31EK-222X	C CAPACITOR	2200pF 25V K	
R5001	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	
R5002	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	

MODEL	MARK	MODEL	MARK
GR-D260EK	A	GR-D280EX	D
GR-D270EW	B	GR-D293AG	E
GR-D273AG	C		

⚠ Symbol No.	Part No.	Part Name	Description	Local
L5001	NQL315K-100X	COIL	10uH K	
L5002	NQL315K-100X	COIL	10uH K	

PRE/MDA BOARD ASSEMBLY <03>

⚠ Symbol No.	Part No.	Part Name	Description	Local
PW1	LYA10017-01C	PRE/MDA BOARD ASSY		
IC1601	BD6637KV	IC	MDA 64PIN	
IC1701	BA10358FVM-W	IC	REELAMP5V	
IC1702	LM393DR-X	IC	REELSMT	
IC3501	JCY0132	IC		
Q1601	UMC3N-W	DIGI TRANSISTOR	LD ON	
D1603	DAP222-X	DIODE ARRAY	LD ON	
D1603 or	MA132WA-X	SI DIODE		
C1601	NCB31EK-103X	C CAPACITOR	0.01uF 25V K	
C1602	NBE20JM-106X	TA E CAPACITOR	10uF 6.3V M	
C1603	NBE20JM-106X	TA E CAPACITOR	10uF 6.3V M	
C1605	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C1606	NCB31HK-152X	C CAPACITOR	1500pF 50V K	
C1607	NCB31CK-473X	C CAPACITOR	0.047uF 16V K	
C1614	NBE21AM-106X	TA E CAPACITOR	10uF 10V M	
C1618	NCB31HK-222X	C CAPACITOR	2200pF 50V K	
C1619	NCB31HK-222X	C CAPACITOR	2200pF 50V K	
C1620	NCB31HK-222X	C CAPACITOR	2200pF 50V K	
C1621	NCB30JK-105X	C CAPACITOR	1uF 6.3V K	
C1622	NCB31CK-223X	C CAPACITOR	0.022uF 16V K	
C1623	NCB31CK-473X	C CAPACITOR	0.047uF 16V K	
C1624	NCB31EK-103X	C CAPACITOR	0.01uF 25V K	
C1625	NDC31HJ-101X	C CAPACITOR	100pF 50V J	
C1626	NCB31HK-472X	C CAPACITOR	4700pF 50V K	
C1627	NCB31HK-472X	C CAPACITOR	4700pF 50V K	
C1628	NCB21CK-224X	C CAPACITOR	0.22uF 16V K	
C1629	NCB21EK-224X	C CAPACITOR	0.22uF 25V K	
C1630	NCB21EK-224X	C CAPACITOR	0.22uF 25V K	
C1631	NBE20JM-106X	TA E CAPACITOR	10uF 6.3V M	
C1632	NCB21CK-474X	C CAPACITOR	0.47uF 16V K	
C1633	NCB21CK-474X	C CAPACITOR	0.47uF 16V K	
C1701	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C1702	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C3501	NBE20JM-106X	TA E CAPACITOR	10uF 6.3V M	
C3502	NBE20JM-106X	TA E CAPACITOR	10uF 6.3V M	
C3503	NBE20JM-106X	TA E CAPACITOR	10uF 6.3V M	
C3504	NCB31CK-473X	C CAPACITOR	0.047uF 16V K	
C3505	NCB31CK-223X	C CAPACITOR	0.022uF 16V K	
C3506	NCB21AK-105X	C CAPACITOR	1uF 10V K	
C3507	NCB31EK-103X	C CAPACITOR	0.01uF 25V K	
C3508	NCB31EK-103X	C CAPACITOR	0.01uF 25V K	
C3509	NCB31EK-103X	C CAPACITOR	0.01uF 25V K	
C3510	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C3511	NCB31EK-103X	C CAPACITOR	0.01uF 25V K	
C3512	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C3513	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C3514	NCB31CK-473X	C CAPACITOR	0.047uF 16V K	
C3515	NCB31CK-473X	C CAPACITOR	0.047uF 16V K	
C3516	NCB31CK-473X	C CAPACITOR	0.047uF 16V K	
C3517	NCB31EK-103X	C CAPACITOR	0.01uF 25V K	
C3518	NCB31EK-103X	C CAPACITOR	0.01uF 25V K	
C3519	NCB31HK-102X	C CAPACITOR	1000pF 50V K	
C3520	NCB31EK-103X	C CAPACITOR	0.01uF 25V K	
C3521	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C3522	NCB20JM-475X	C CAPACITOR	4.7uF 6.3V M	
C3523	NCB31EK-103X	C CAPACITOR	0.01uF 25V K	
C3524	NCB31EK-103X	C CAPACITOR	0.01uF 25V K	
C3525	NCB20JM-475X	C CAPACITOR	4.7uF 6.3V M	
C3526	NCB31EK-103X	C CAPACITOR	0.01uF 25V K	
C3527	NDC31HJ-221X	C CAPACITOR	220pF 50V J	
R1601	NRSA63J-681X	MG RESISTOR	680Ω 1/16W J	
R1602	NRSA63J-124X	MG RESISTOR	120kΩ 1/16W J	
R1603	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	
R1604	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J	
R1610	NRSA63J-391X	MG RESISTOR	390Ω 1/16W J	
R1611	NRSA63J-391X	MG RESISTOR	390Ω 1/16W J	
R1612	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J	
R1613	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R1614	NRZ0072-R330X	MG RESISTOR	0.33Ω 1/4W F	
R1616	NRSA63D-392X	MG RESISTOR	3.9kΩ 1/16W D	
R1617	NRZ0072-R330X	MG RESISTOR	0.33Ω 1/4W F	
R1620	NRSA63J-683X	MG RESISTOR	68kΩ 1/16W J	
R1621	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R1622	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R1624	NRSA63D-183X	MG RESISTOR	18kΩ 1/16W D	
R1625	NRSA63D-681X	MG RESISTOR	680Ω 1/16W D	
R1629	NRSA63J-564X	MG RESISTOR	560kΩ 1/16W J	
R1635	NRSA63J-332X	MG RESISTOR	3.3kΩ 1/16W J	
R1636	NRSA63J-123X	MG RESISTOR	12kΩ 1/16W J	
R1637	NRSA63J-154X	MG RESISTOR	150kΩ 1/16W J	
R1701	NRSA63J-823X	MG RESISTOR	82kΩ 1/16W J	
R1702	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R1703	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R1704	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R1705	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R1706	NRSA63J-823X	MG RESISTOR	82kΩ 1/16W J	
R1707	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R1708	NRSA63J-124X	MG RESISTOR	120kΩ 1/16W J	
R1709	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R1710	NRSA63J-124X	MG RESISTOR	120kΩ 1/16W J	
R1711	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R1712	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R3501	NRSA63J-471X	MG RESISTOR	470Ω 1/16W J	
R3502	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J	
R3503	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R3504	NRSA63D-241X	MG RESISTOR	240Ω 1/16W D	
R3505	NRSA63D-241X	MG RESISTOR	240Ω 1/16W D	
R3506	NRSA63D-241X	MG RESISTOR	240Ω 1/16W D	
R3507	NRSA63D-241X	MG RESISTOR	240Ω 1/16W D	
R3508	NRSA63J-223X	MG RESISTOR	22kΩ 1/16W J	
R3512	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
L1601	NQL382M-100X	COIL	10uH M	
L1602	NRSA02J-0R0X	MG RESISTOR	0Ω 1/10W J	
L3501	NQR0006-001X	FERRITE BEADS		
L3502	NQL402M-100X	COIL	10uH M	
L3503	NQR0006-001X	FERRITE BEADS		
L3504	NQR0006-001X	FERRITE BEADS		
L3505	NQR0006-001X	FERRITE BEADS		
CN401	QGF0508F1-40X	CONNECTOR	MAIN1(PRE) FFC/FPC (1-40)	
CN402	QGF0520F1-08X	CONNECTOR	HEAD FFC/FPC (1-8)	
CN403	QGF0505F2-06X	CONNECTOR	LOADING FFC/FPC (1-6)	
CN404	QGF0534F1-11X	CONNECTOR	DRUM FFC/FPC (1-11)	
CN405	QGF0534F1-18X	CONNECTOR	CAPSTAN FFC/FPC (1-18)	
CN406	QGF0505F2-16X	CONNECTOR	SENSOR FFC/FPC (1-16)	
CN407	QGF0508F1-06X	CONNECTOR	ROT E SW FFC/FPC (1-6)	
CN408	QGF0508F1-40X	CONNECTOR	MAIN2(MDA) FFC/FPC (1-40)	
⚠ F1601	NMFZ007-R20X-K	FUSE	1608 UNREG 0.2A 50V	
⚠ F1602	NMFZ007-R50X-K	FUSE	1608 REG3V 0.5A 50V	
SD1	LY34573-001A	SHIELD CASE(PR)	PRE S-CASE	

OPE BOARD ASSEMBLY <04>

⚠ Symbol No.	Part No.	Part Name	Description	Local
PW2	LYA10019-01C2	OPE BOARD ASSY		
R302	NRSA63J-332X	MG RESISTOR	3.3kΩ 1/16W J	
R303	NRSA63J-682X	MG RESISTOR	6.8kΩ 1/16W J	
R304	NRSA63J-223X	MG RESISTOR	22kΩ 1/16W J	
CN301	QGF0545F1-26X	CONNECTOR	FFC/FPC (1-26)	
CN302	QGF0517F2-20X	CONNECTOR	(MONITOR) FFC/FPC (1-20)	
S301	NSW0198-001X	TACT SWITCH	(MENU)	
S302	NSW0198-001X	TACT SWITCH	(PLAY)	
S303	NSW0198-001X	TACT SWITCH	(LIGHT)	
S304	NSW0198-001X	TACT SWITCH	(REW)	
S305	NSW0198-001X	TACT SWITCH	(STOP)	
S306	NSW0198-001X	TACT SWITCH	(FF)	

MODEL	MARK	MODEL	MARK
GR-D260EK	A	GR-D280EX	D
GR-D270EW	B	GR-D293AG	E
GR-D273AG	C		

⚠ Symbol No.	Part No.	Part Name	Description	Local
OT1	LY30034-0P2A	SPACER(A)	(x3)	

SD BOARD ASSEMBLY <05>

⚠ Symbol No.	Part No.	Part Name	Description	Local
PW1	LYA10018-01C	SD BOARD ASSY		
D901	EMZ6.8N-X	Z DIODE		
C901	NCB31CK-103X	C CAPACITOR	0.01uF 16V K	
C902	NBZ0015-106X	TA E CAPACITOR	10uF 6.3V M	
R901	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R902	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R903	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R904	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R905	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R906	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R907	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R908	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
L901	NQR0006-001X	FERRITE BEADS		
CN901	QGF0517F2-12X	CONNECTOR	FFC/FPC (1-12)	
CN902	NNZ0058-001X	SD CARD CONNE		
S901	NSW0099-001X	SLIDE SWITCH		
WR1	WJT0175-001B-E	E-CARD WIRE		

MONITOR BOARD ASSEMBLY <06>

⚠ Symbol No.	Part No.	Part Name	Description	Local
PW1	LYA10019-02C1	MONITOR BOARD ASSY		
IC7601	DN8797MS-X	IC		
Q7501	DTC144EE-X	DIGI TRANSISTOR		
Q7501 or	BCR148T-X	DIGI TRANSISTOR		
Q7501 or	UN9213J-X	DIGI TRANSISTOR		
Q7501 or	PDTC144EE-X	DIGI TRANSISTOR		
Q7502	DTA144EE-X	DIGI TRANSISTOR		
Q7502 or	BCR198T-X	DIGI TRANSISTOR		
Q7502 or	UN9113J-X	DIGI TRANSISTOR		
Q7502 or	PDTA144EE-X	DIGI TRANSISTOR		
Q7503	2SD1664/QR/-W	TRANSISTOR		
Q7503 or	STD1664/OY/-W	TRANSISTOR		
Q7504	2SD1664/QR/-W	TRANSISTOR		
Q7504 or	STD1664/OY/-W	TRANSISTOR		
D7602	RB521S-30-X	SB DIODE		
D7603	RB521S-30-X	SB DIODE		
D7604	RB521S-30-X	SB DIODE		
D7605	RB521S-30-X	SB DIODE		
C7501	NCB10JK-106X	C CAPACITOR	10uF 6.3V K	
C7502	NCB21HK-183X	C CAPACITOR	0.018uF 50V K	
C7504	NCZ1016-150X	C CAPACITOR	15pF 2kV J	
C7505	NCZ1016-150X	C CAPACITOR	15pF 2kV J	
C7602	NCB10JK-106X	C CAPACITOR	10uF 6.3V K	
C7603	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C7604	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C7605	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C7606	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C7607	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C7608	NCB11EK-105X	C CAPACITOR	1uF 25V K	
C7609	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C7610	NCB11EK-105X	C CAPACITOR	1uF 25V K	
C7611	NCB11EK-105X	C CAPACITOR	1uF 25V K	
C7612	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C7613	NCB31EK-153X	C CAPACITOR	0.015uF 25V K	
C7614	NCB31CK-224X	C CAPACITOR	0.22uF 16V K	
C7615	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
R7503	NRSA63J-182X	MG RESISTOR	1.8kΩ 1/16W J	
R7607	NRSA63D-223X	MG RESISTOR	22kΩ 1/16W D	
R7608	NRSA63J-106X	MG RESISTOR	10MΩ 1/16W J	
R7609	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J	
R7610	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
L7502	NQLZ010-680X	COIL	68uH	
L7602	NQL38DK-101X	P COIL	100uH K	
T7501	NQS0060-001X	SW TARNSF		
CN7601	QGF0545F1-20X	CONNECTOR	FFC/FPC (1-20)	
CN7602	QGF0528F1-40X	CONNECTOR	LCD FFC/FPC (1-40)	
⚠ F7501	NMFZ007-R40X-K	FUSE	0.4A 50V	
OT1	QAL0396-001	FPC		

FRONT BOARD ASSEMBLY <07>

⚠ Symbol No.	Part No.	Part Name	Description	Local
PW1	LYA10020-03B	FRONT BOARD ASSY		
IC701	RPM7138-SV4	IR DETECT UNIT	IR_SENSOR	
IC701 or	KSM-2003TN2E	IR DETECT UNIT	IR_SENSOR	
Q701	RPM-22PB	PHOTO TRANSISTOR	W/B	
Q702	BC847PN-X	PAIR TRANSISTOR		
Q703	BC847PN-X	PAIR TRANSISTOR		
Q704	2SC4617/RS/-X	TRANSISTOR		
D701	UDZS6.8B-X	Z DIODE		
D702	NSPW500BS/CRS/	LED		
D703	NSPW500BS/CRS/	LED		
C701	NBE20JM-106X	TA E CAPACITOR	10uF 6.3V M	
C702	NBE20JM-106X	TA E CAPACITOR	10uF 6.3V M	
C705	NCB31HK-102X	C CAPACITOR	1000pF 50V K	
C706	NCB31HK-102X	C CAPACITOR	1000pF 50V K	
R701	NRSA63J-152X	MG RESISTOR	1.5kΩ 1/16W J	
R702	NRSA63J-470X	MG RESISTOR	47Ω 1/16W J	
R703	NRSA63J-391X	MG RESISTOR	390Ω 1/16W J	
R704	NRSA63J-182X	MG RESISTOR	1.8kΩ 1/16W J	
R705	NRSA63J-152X	MG RESISTOR	1.5kΩ 1/16W J	
R706	NRSA63J-270X	MG RESISTOR	27Ω 1/16W J	
R707	NRSA63J-152X	MG RESISTOR	1.5kΩ 1/16W J	
R708	NRSA63J-270X	MG RESISTOR	27Ω 1/16W J	
R709	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R710	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
L701	NQR0265-001X	FERRITE BEADS		
L702	NQR0269-013X	FERRITE BEADS		
L703	NQR0269-013X	FERRITE BEADS		
⚠ BT701	QAB0050-001	LITHIUM BATTERY	CR2032/H1G 3V 220mAh	
CN701	QGF0543F1-17X	CONNECTOR	FFC/FPC (1-17)	
J701	QNS0147-001	3.5 JACK	EXT MIC	
S701	NSW0221-001X	DETECT SWITCH	EJECT SW	
S702	NSW0252-001	DETECT SWITCH	MONI_SW	
WR1	QUQ105-1703AA-E	FFC WIRE	17pin 3cm	

VF BOARD ASSEMBLY <08>

⚠ Symbol No.	Part No.	Part Name	Description	Local
PW1	LYA20014-01B	VF BOARD ASSY		
Q7001	2SC4617/QR/-X	TRANSISTOR		
Q7001 or	2SC4738/YG/-X	TRANSISTOR		
Q7001 or	2SD2216J/QR/-X	TRANSISTOR		
Q7001 or	BC847BT-X	TRANSISTOR		
D7001	E1S35AW0C501-X	LED		

MODEL	MARK	MODEL	MARK
GR-D260EK	A	GR-D280EX	D
GR-D270EW	B	GR-D293AG	E
GR-D273AG	C		

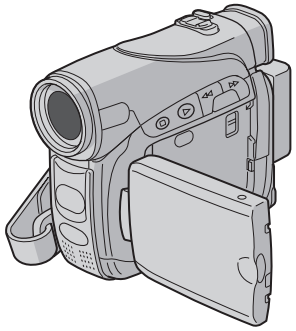
⚠ Symbol No.	Part No.	Part Name	Description	Local
C7001	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C7002	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C7003	NDC31HJ-101X	C CAPACITOR	100pF 50V J	
C7004	NDC31HJ-101X	C CAPACITOR	100pF 50V J	
R7001	NRSA63D-682X	MG RESISTOR	6.8kΩ 1/16W D	
R7002	NRSA63D-272X	MG RESISTOR	2.7kΩ 1/16W D	
R7003	NRSA63D-820X	MG RESISTOR	82Ω 1/16W D	
R7004	NRSA63D-273X	MG RESISTOR	27kΩ 1/16W D	
R7005	NRSA63D-563X	MG RESISTOR	56kΩ 1/16W D	
R7006	NRSA63D-163X	MG RESISTOR	16kΩ 1/16W D	
R7007	NRSA63D-472X	MG RESISTOR	4.7kΩ 1/16W D	
R7008	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R7009	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
CN7001	QGF0545F1-14X	CONNECTOR	FFC/FPC (1-14)	
CN7002	QGF0530F3-15W	CONNECTOR	LCD FFC/FPC (1-15)	

JVC

SERVICE MANUAL

DIGITAL VIDEO CAMERA

GR-D270EK, GR-D270EX, GR-D270EY, GR-D270EZ, GR-D290EK, GR-D290EX, GR-D290EY, GR-D290EZ



Mini DV PAL

SD

MultiMediaCard

GR-D270EK, GR-D270EX,
GR-D270EY, GR-D270EZ[M5D2S5]
GR-D290EK, GR-D290EX,
GR-D290EY, GR-D290EZ[M5D2S7]

For disassembling and assembling of MECHANISM ASSEMBLY, refer to the SERVICE MANUAL No.86700(MECHANISM ASSEMBLY).

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No.YF080
2005/2

SPECIFICATION

■Camcorder

For General	Power supply		DC 11.0 V(Using AC Adapter) DC 7.2 V (Using battery pack)
	Power consumption		Approx. 3.2 W (3.5 W*) (LCD monitor off, viewfinder on) Approx. 4.2 W (4.5 W*) (LCD monitor on, viewfinder off) * Using LED Light
	Dimensions (W × H × D)		56 mm × 94 mm × 112 mm (with the LCD monitor closed and the viewfinder pushed back in, without ring of the lens)
	Weight		Approx. 430g (without battery, cassette, memory card and lens cap) Approx. 510 g (incl. battery, cassette, memory card and lens cap)
	Operating temperature		0°C to 40°C
	Operating humidity		35% to 80%
	Storage temperature		-20°C to 50°C
	Pickup		1/6" CCD
	Lens		F 1.8, f = 2.2 mm to 55 mm, 10:1 power zoom lens
	Filter diameter		Ø27 mm (When attaching an optional conversion lens or filter, remove the ring of the lens.)
	LCD monitor		2.5" diagonally measured, LCD panel/TFT active matrix system
	Viewfinder		Electronic viewfinder with 0.16" color LCD
	Speaker		Monaural
	LED Light		Effective distance: 1.5 m
For Digital Video Camera	Format		DV format (SD mode)
	Signal format		PAL standard
	Recording/Playback format	Video	Digital component recording
		Audio	PCM digital recording, 32 kHz 4-channel (12-bit), 48 kHz 2-channel (16-bit)
	Cassette		Mini DV cassette
	Tape speed		SP: 18.8 mm/s, LP: 12.5 mm/s
	Maximum recording time (using 80 min. cassette)		SP: 80 min., LP: 120 min.
For Digital Still Camera	Storage media		SD Memory Card/MultiMediaCard
	Compression system		JPEG (compatible)
	File size		Still image : 2 modes (1024 × 768 pixels/640 × 480 pixels) Moving image:1 mode (160 × 120 pixels)
	Picture quality		2 modes (FINE/STANDARD)
For Connectors	S	S-Video input	Y: 0.8 V to 1.2 V (p-p), 75Ω , analogue C: 0.2 V to 0.4 V (p-p), 75Ω , analogue
		S-Video output	Y: 1.0 V (p-p), 75Ω, analogue C: 0.29 V (p-p), 75Ω, analogue
	AV	Video input	0.8 V to 1.2 V (p-p), 75Ω, analogue
		Video output	1.0 V (p-p), 75Ω, analogue
		Audio input	300 mV (rms), 50 kΩ , analogue, stereo
		Audio output	300 mV (rms), 1 kΩ, analogue, stereo
	Microphone	input	Ø3.5 mm, stereo
	DV	Input/output	4-pin, IEEE 1394 compliant
	USB		Mini USB-B type, USB 1.1/2.0 (Full speed for GR-D270, High speed for GR-D290) compliant

■AC Adapter

Power requirement	AC 110 V to 240 V, 50 Hz/60 Hz
Output	DC 11 V, 1 A

Specifications shown are for SP mode unless otherwise indicated. E & O.E. Design and specifications subject to change without notice.

SECTION 1
PRECAUTIONS

1.1 SAFTY PRECAUTIONS

Prior to shipment from the factory, JVC products are strictly inspected to conform with the recognized product safety and electrical codes of the countries in which they are to be sold.However,in order to maintain such compliance, it is equally important to implement the following precautions when a set is being serviced.

1.1.1 Precautions during Servicing

(1) Locations requiring special caution are denoted by labels and inscriptions on the cabinet, chassis and certain parts of the product.When performing service, be sure to read and comply with these and other cautionary notices appearing in the operation and service manuals.

(2) Parts identified by the ⚠symbol and shaded ( ) parts are critical for safety.
Replace only with specified part numbers.

NOTE :
Parts in this category also include those specified to comply with X-ray emission standards for products using cathode ray tubes and those specified for compliance with various regulations regarding spurious radiation emission.

(3) Fuse replacement caution notice.
Caution for continued protection against fire hazard.
Replace only with same type and rated fuse(s) as specified.

(4) Use specified internal wiring. Note especially:
- Wires covered with PVC tubing
- Double insulated wires
- High voltage leads

(5) Use specified insulating materials for hazardous live parts. Note especially:
- Insulation Tape
- PVC tubing
- Spacers
- Insulation sheets for transistors
- Barrier

(6) When replacing AC primary side components (transformers, power cords, noise blocking capacitors, etc.) wrap ends of wires securely about the terminals before soldering.

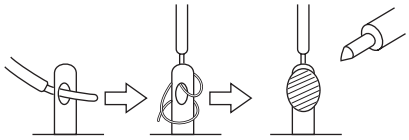


Fig.1-1-1

(7) Observe that wires do not contact heat producing parts (heatsinks, oxide metal film resistors, fusible resistors, etc.)

(8) Check that replaced wires do not contact sharp edged or pointed parts.

(9) When a power cord has been replaced, check that 10-15 kg of force in any direction will not loosen it.

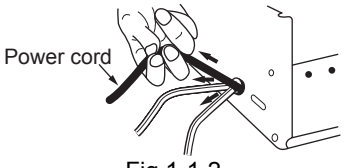


Fig.1-1-2

(10) Also check areas surrounding repaired locations.

(11) Products using cathode ray tubes (CRTs)In regard to such products, the cathode ray tubes themselves, the high voltage circuits, and related circuits are specified for compliance with recognized codes pertaining to X-ray emission. Consequently, when servicing these products, replace the cathode ray tubes and other parts with only the specified parts. Under no circumstances attempt to modify these circuits.Unauthorized modification can increase the high voltage value and cause X-ray emission from the cathode ray tube.

(12) Crimp type wire connectorIn such cases as when replacing the power transformer in sets where the connections between the power cord and power trans former primary lead wires are performed using crimp type connectors, if replacing the connectors is unavoidable, in order to prevent safety hazards, perform carefully and precisely according to the following steps.

- **Connector part number** :E03830-001
- **Required tool** : Connector crimping tool of the proper type which will not damage insulated parts.
- **Replacement procedure**

a) Remove the old connector by cutting the wires at a point close to the connector.Important : Do not reuse a connector (discard it).

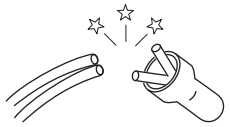


Fig.1-1-3

b) Strip about 15 mm of the insulation from the ends of the wires. If the wires are stranded, twist the strands to avoid frayed conductors.

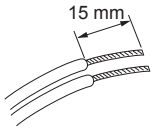


Fig.1-1-4

c) Align the lengths of the wires to be connected. Insert the wires fully into the connector.

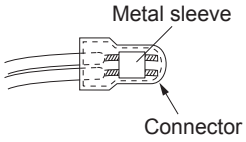


Fig.1-1-5

d) As shown in Fig.1-1-6, use the crimping tool to crimp the metal sleeve at the center position. Be sure to crimp fully to the complete closure of the tool.

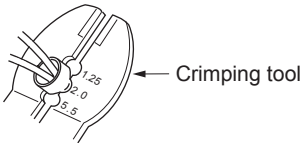


Fig.1-1-6

e) Check the four points noted in Fig.1-1-7.

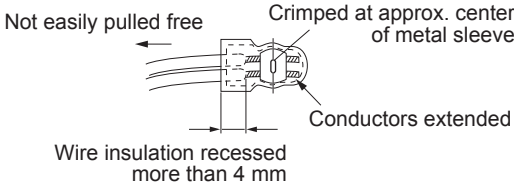

Not easily pulled free
Crimped at approx. center of metal sleeve
Conductors extended
Wire insulation recessed more than 4 mm

Fig.1-1-7

1.1.2 Safety Check after Servicing

Examine the area surrounding the repaired location for damage or deterioration. Observe that screws, parts and wires have been returned to original positions, Afterwards, perform the following tests and confirm the specified values in order to verify compliance with safety standards.

(1) Insulation resistance test
Confirm the specified insulation resistance or greater between power cord plug prongs and externally exposed parts of the set (RF terminals, antenna terminals, video and audio input and output terminals, microphone jacks, earphone jacks, etc.).See table 1 below.

(2) Dielectric strength test
Confirm specified dielectric strength or greater between power cord plug prongs and exposed accessible parts of the set (RF terminals, antenna terminals, video and audio input and output terminals, microphone jacks, earphone jacks, etc.). See Fig.1-1-11 below.

(3) Clearance distance
When replacing primary circuit components, confirm specified clearance distance (d), (d') between soldered terminals, and between terminals and surrounding metallic parts. See Fig.1-1-11 below.

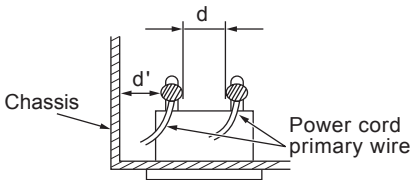


Fig.1-1-8

(4) Leakage current test
Confirm specified or lower leakage current between earth ground/power cord plug prongs and externally exposed accessible parts (RF terminals, antenna terminals, video and audio input and output terminals, microphone jacks, earphone jacks, etc.).
Measuring Method : (Power ON)Insert load Z between earth ground/power cord plug prongs and externally exposed accessible parts. Use an AC voltmeter to measure across both terminals of load Z. See Fig.1-1-9 and following Fig.1-1-12.

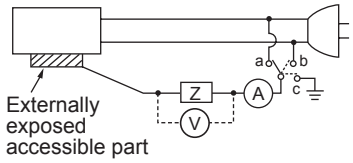
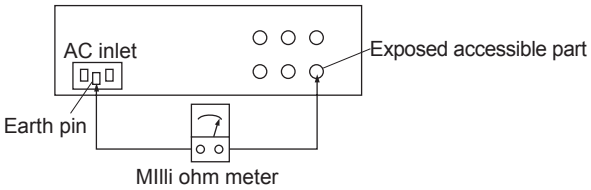


Fig.1-1-9

(5) Grounding (Class 1 model only)
Confirm specified or lower grounding impedance between earth pin in AC inlet and externally exposed accessible parts (Video in, Video out, Audio in, Audio out or Fixing screw etc.).Measuring Method:
Connect milli ohm meter between earth pin in AC inlet and exposed accessible parts. See Fig.1-1-10 and grounding specifications.



Grounding Specifications

Region	Grounding Impedance (Z)
USA & Canada	Z ≦ 0.1 ohm
Europe & Australia	Z ≦ 0.5 ohm

Fig.1-1-10

AC Line Voltage	Region	Insulation Resistance (R)	Dielectric Strength	Clearance Distance (d), (d')
100 V	Japan	R≧ 1 MΩ/500 V DC	AC 1 kV 1 minute	d, d' ≧ 3 mm
100 to 240 V			AC 1.5 kV 1 minute	d, d' ≧ 4 mm
110 to 130 V	USA & Canada	1 MΩ ≦R≦ 12 MΩ/500 V DC	AC 1 kV 1 minute	d, d' ≧ 3.2 mm
110 to 130 V 200 to 240 V	Europe & Australia	R≧ 10 MΩ/500 V DC	AC 3 kV 1 minute (Class Ⅱ) AC 1.5 kV 1 minute (Class Ⅰ)	d ≧ 4 mm d' ≧ 8 mm (Power cord) d' ≧ 6 mm (Primary wire)

Fig.1-1-11

AC Line Voltage	Region	Load Z	Leakage Current (i)	a, b, c
100 V	Japan	1 kΩ	i ≦ 1 mA rms	Exposed accessible parts
110 to 130 V	USA & Canada	0.15 μF, 1.5 kΩ	i ≦ 0.5 mA rms	Exposed accessible parts
110 to 130 V 220 to 240 V	Europe & Australia	2 kΩ	i ≦ 0.7 mA peak i ≦ 2 mA dc	Antenna earth terminals
		50 kΩ	i ≦ 0.7 mA peak i ≦ 2 mA dc	Other terminals

Fig.1-1-12

NOTE :

These tables are unofficial and for reference only. Be sure to confirm the precise values for your particular country and locality.

SECTION 2
SPECIFIC SERVICE INSTRUCTIONS

2.1 DIFFERENCE LIST

The following table indicate main different points between models GR-D270EK, GR-D270EX, GR-D270EY, GR-D270EZ, GR-D290EK, GR-D290EX, GR-D290EY and GR-D290EZ.

MODEL	GR-D270EK	GR-D270EX	GR-D270EY	GR-D270EZ	GR-D290EK	GR-D290EX	GR-D290EY	GR-D290EZ
AC ADAPTER	AP-V14E	AP-V17E	AP-V17E	AP-V17E	AP-V14E	AP-V17E	AP-V17E	AP-V17E
AC CORD	YES (BS PLUG)	NO	NO	NO	YES (BS PLUG)	NO	NO	NO
MEMORY CARD	NO	NO	NO	NO	YES (MMC 8MB)	YES (MMC 8MB)	YES (MMC 8MB)	YES (MMC 8MB)

SECTION 3
DISASSEMBLY

3.1 BEFORE ASSEMBLY AND DISASSEMBLY

3.1.1 Precautions

- Be sure to disconnect the power supply unit prior to mounting and soldering of parts.
- Prior to removing a component part that needs to disconnect its connector(s) and its screw(s), first disconnect the wire(s) from the connector(s), and then remove the screw(s).
- When connecting/disconnecting wires, pay enough attention not to damage the connectors.
- When inserting the flat wire to the connector, pay attention to the direction of the flat wire.
- Be careful in removing the parts to which some spacer or shield is attached for reinforcement or insulation.
- When replacing chip parts (especially IC parts), first remove the solder completely to prevent peeling of the pattern.
- Tighten screws properly during the procedures. Unless otherwise specified, tighten screws at a torque of 0.092N·m (0.94kgf·cm). However, as this is a required value at the time of production, use the value as a measuring stick when proceeding repair services. (See "SERVICE NOTE" as for tightening torque.)

3.1.2 Destination of connectors

Two kinds of double-arrows in connection tables respectively show kinds of connector/wires.

⇔ : Flat wire ↔ : Wire ⬌ : Board to board (B-B)
: The connector of the side to remove

CONN. No.	CONNECTOR					PIN No.
CN2a	MAIN	CN101	⇔	MONI BW	CN761	40
CN2b	MAIN	CN103	↔	MINI BW	CN762	10

3.1.3 Disconnection of connectors (Wires)

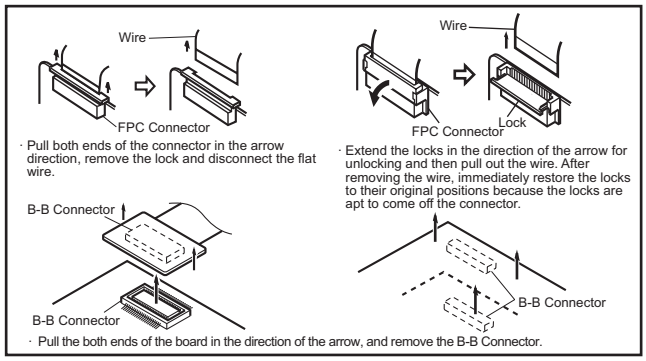

Wire
FPC Connector
· Pull both ends of the connector in the arrow direction, remove the lock and disconnect the flat wire.
Wire
FPC Connector
Lock
· Extend the locks in the direction of the arrow for unlocking and then pull out the wire. After removing the wire, immediately restore the locks to their original positions because the locks are apt to come off the connector.
B-B Connector
B-B Connector
B-B Connector
· Pull the both ends of the board in the direction of the arrow, and remove the B-B Connector.

Fig.3-1-1

3.1.4 Tools required for disassembly and assembly

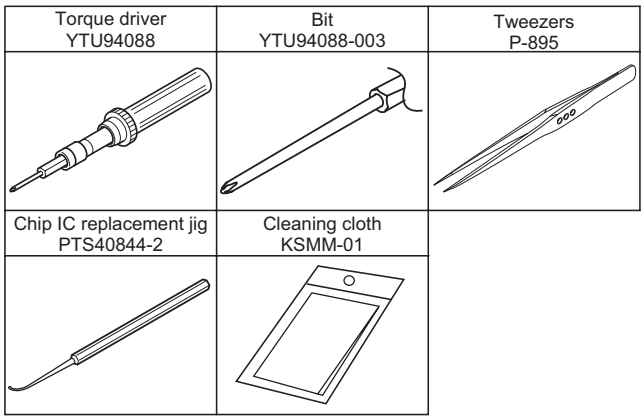


Fig.3-1-2

- **Torque driver**
  Be sure to use to fastening the mechanism and exterior parts because those parts must strictly be controlled for tightening torque.
- **Bit**
  This bit is slightly longer than those set in conventional torque drivers.
- **Tweezers**
  To be used for removing and installing parts and wires.
- **Chip IC replacement jig**
  To be used for replacement of IC.
- **Cleaning cloth**
  Recommended cleaning cloth to wipe down the video heads, mechanism (tape transport system), optical lens surface.

3.2 ASSEMBLY AND DISASSEMBLY OF MAIN PARTS

3.2.1 Assembly and disassembly

When reassembling, perform the step(s) in reverse order.

STEP No.	PART	Fig. No.	POINT	NOTE
[1]	TOP COVER ASSY	C1	4(S1a), 3(L1a),CN1a	-
[2]	UPPER ASSY (Inc. VF ASSY, SPEAKER/MONITOR)	C2-1	(S2a),2(S2b),3(S2c) 2(SD1a), L2,CN2a,b	-
[8]	E.VF UNIT(B/W)	C2-2	2(S8),L8,CN8a	NOTE 8
(∗1)	(∗2)	(∗3)	(∗4)	(∗5)

(∗1) Order of steps in Procedure
When reassembling, preform the step(s) in the reverseorder. These numbers are also used as the identification (location) No. of parts Figures.
(∗2) Part to be removed or installed.
(∗3) Fig. No. showing Procedure or Part Location.
C = CABINET
(∗4) Identification of part to be removed, unhooked, unlocked, released, unplugged, unclamped or unsoldered.
S = Screw
L = Lock, Release, Hook
SD = Solder
CN = Connector

[Example]

- 4 (S1a) = Remove 4 S1a screws.
- 3 (L1a) = Disengage 3 L1a hooks.
- 2 (SD1a) = Unsolder 2 SD1a points.
- CN1a = Remove a CN1a connector.

(∗5) Adjustment information for installation.

3.2.2 ASSEMBLY/DISASSEMBLY OF CABINET PARTS AND ELECTRICAL PARTS

●Disassembly procedure

STEP No.	PART NAME	Fig. No.	POINT	NOTE
[1]	TOP COVER ASSY	FA1	GRIP BELT,S1a,S1b,S1c,L1a,b,c,d,e,f	NOTE1a,b
[2]	MONITOR ASSY	FA2	S2a,5(S2b),CASSETTE COVER,S2c, S2d,L2,CN2	NOTE2a,b
[3]	VF ASSY	FA3	2(S3a),2(S3b),L3,CN3	-
[4]	LOWER UNIT ASSY		S4a,S4b,L4a,b,CN4a,b	NOTE4a,b,c
[5]	REAR UNIT	FA4	L5a,b,CN5a,b	-
[6]	FRONT COVER ASSY	FA5-1,2	S6,L6a,b,c,CN6a,b,2(S6b),PLATE(MIC), MIC,L6e,d,FRONT BOARD ASSY	-
[7]	OP BLOCK ASSY		CN7a,CN7b	-
[8]	MAIN BOARD ASSY	FA6	S8,L8a,b,CN8a,b	-
[9]	FRAME(Z27) ASSY	FA7	3(S9)	-
[10]	SIELD COVER(PR)		2(S10), L10	NOTE10
[11]	PRE/MDA BOARD ASSY	FA8	CN11a,b,c,d,e,f,2(S11)	-
[12]	MECHA(B) ASSY		-	-

NOTE1a:
During the procedure, remove the GRIP BELT.

NOTE1b:
Remove the screw (3) by pulling the COVER (SD) ASSY.

NOTE2a:
Remove the MONITOR ASSY by slightly lifting L2, with the CASSETTE COVER open.

NOTE2b:
When attaching the MONITOR ASSY, be careful not to damage the MONI SW.

NOTE4a:
Remove L4a by slightly lifting the REAR UNIT.

NOTE4b:
Be careful not to damage the connector.

NOTE4c:
When attaching the MONITOR ASSY, be careful not to damage the EJECT SW.
Attach the MONITOR ASSY, with the CASSETTE COVER closed.

NOTE10:
When attaching, firmly press the SHIELD COVER (PR) over the FPC.

●Destination of connectors

CN.NO.	CONNECTOR					PIN NO.
CN2	OPE	CN301	⇔	MAIN	CN110	26
CN3	MAIN	CN108	⇔	VF	CN7001	16
CN4a	MAIN	CN109	⇔	ZOOM UNIT	-	12
CN4b	MAIN	CN112	↔	SPEAKER	-	2
CN5a	MAIN	CN107	⇔	REAR UNIT	-	40
CN5b	MAIN	CN111	⇔	SD	CN901	12
CN6a	MAIN	CN103	⇔	FRONT	CN701	17
CN6b	MAIN	CN114	↔	INT MIC	-	4
CN7a	MAIN	CN101	⇔	CCD	-	20
CN7b	MAIN	CN102	⇔	OP BLOCK	-	24
CN8a	MAIN	CN105	⇔	PRE/MDA	CN408	40
CN8b	MAIN	CN104	⇔	PRE/MDA	CN401	40
CN11a	PRE/MDA	CN406	⇔	SENSOR	-	16
CN11b	PRE/MDA	CN405	⇔	CAPSTAN MOTOR	-	18
CN11c	PRE/MDA	CN404	⇔	DRUM MOTOR	-	11
CN11d	PRE/MDA	CN402	⇔	HEAD	-	8
CN11e	PRE/MDA	CN407	⇔	ROTARY ENCODER SW	-	6
CN11f	PRE/MDA	CN403	⇔	LOADING MOTOR	-	6

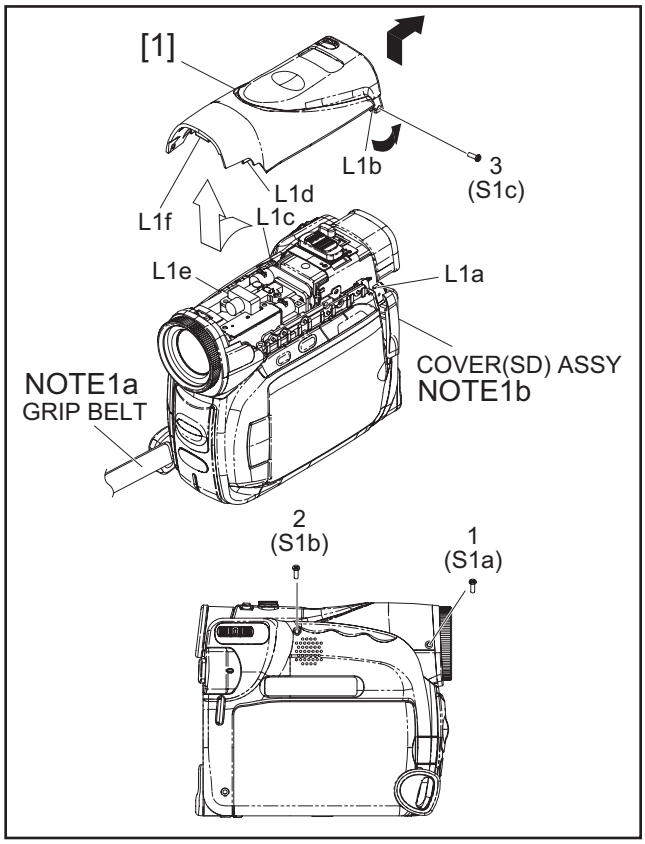


Fig.FA1

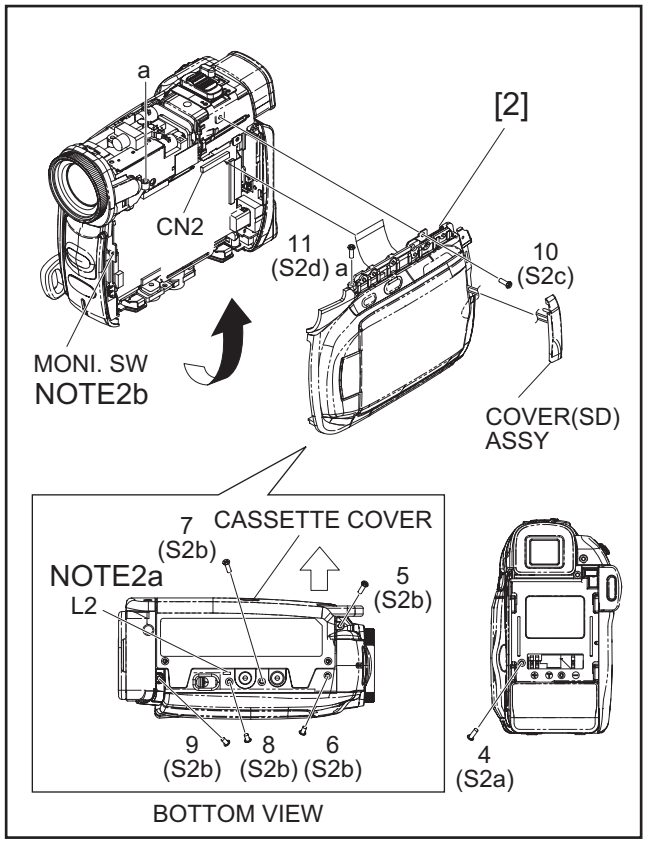


Fig.FA2

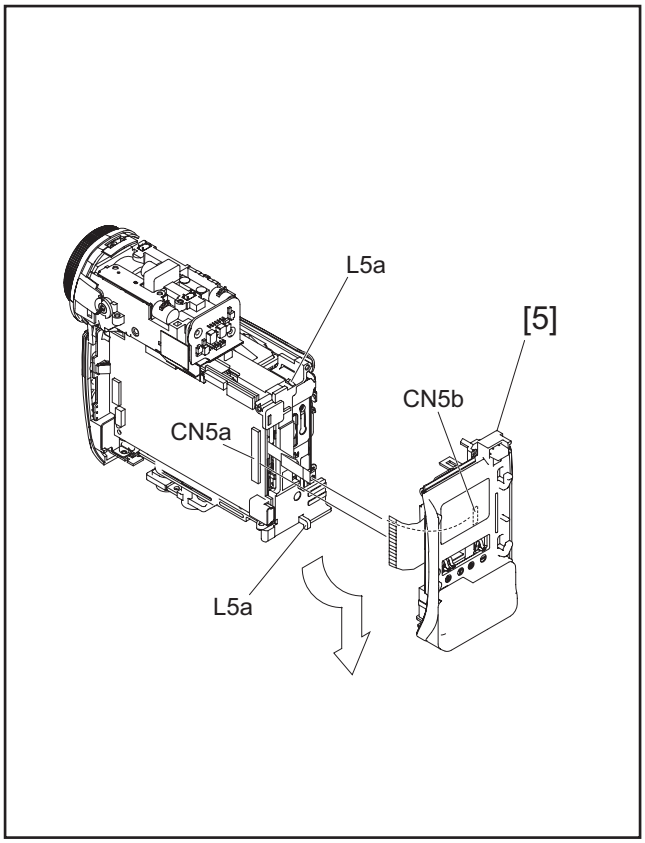


Fig.FA4

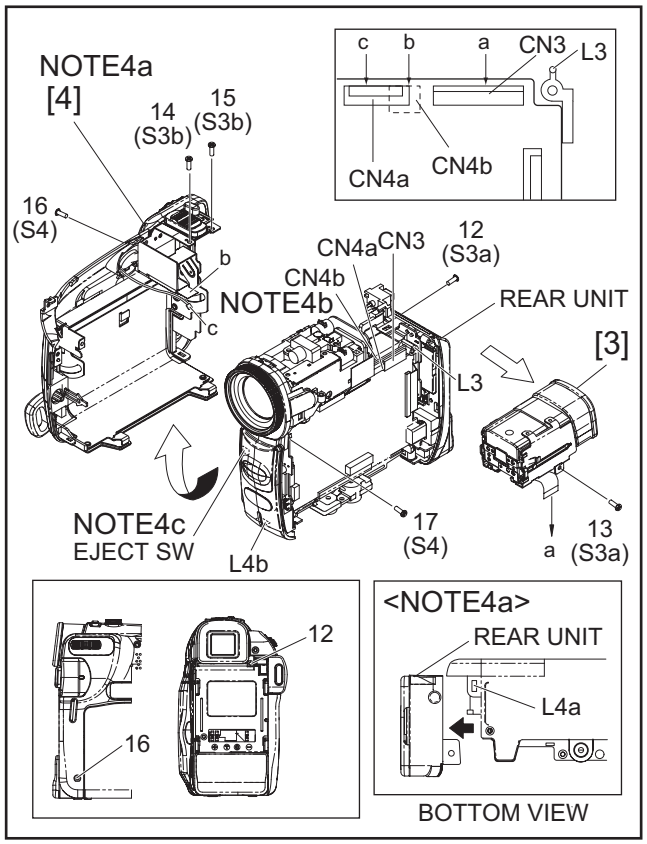


Fig.FA3

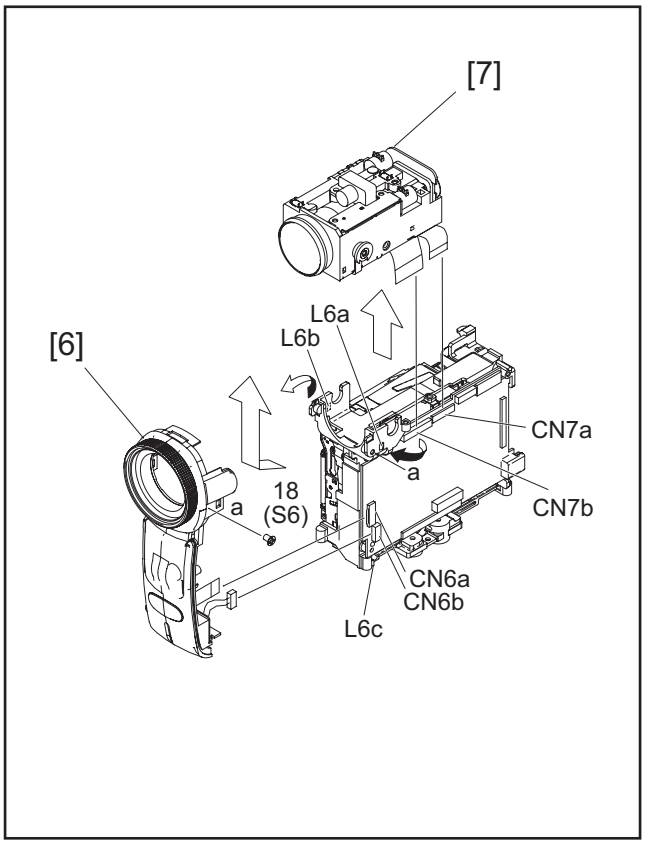


Fig.FA5-1

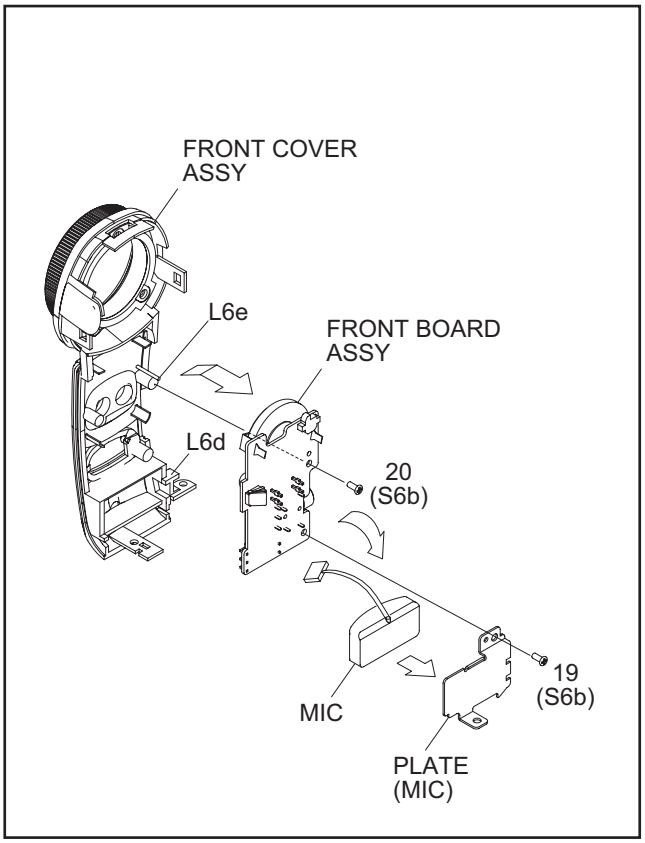


Fig.FA5-2

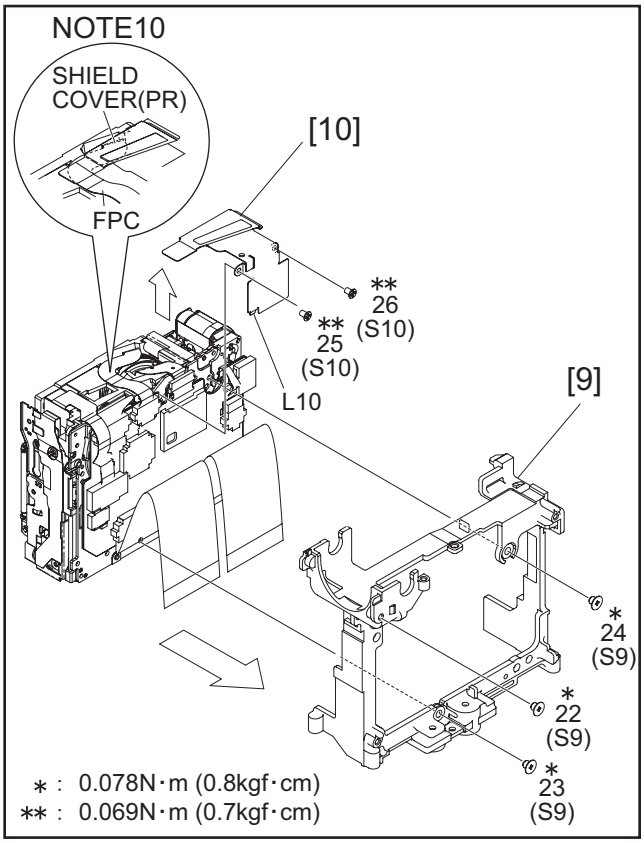


Fig.FA7

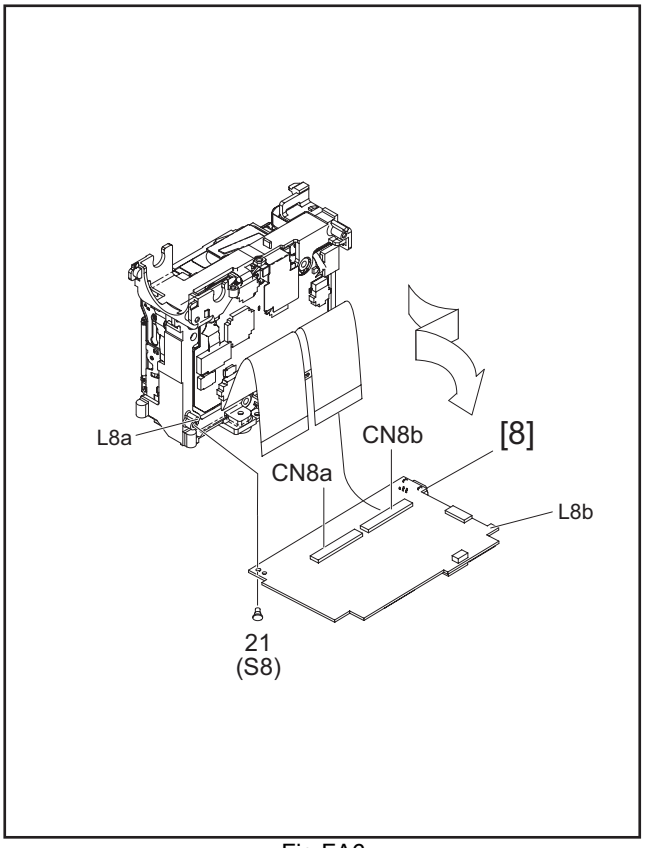


Fig.FA6

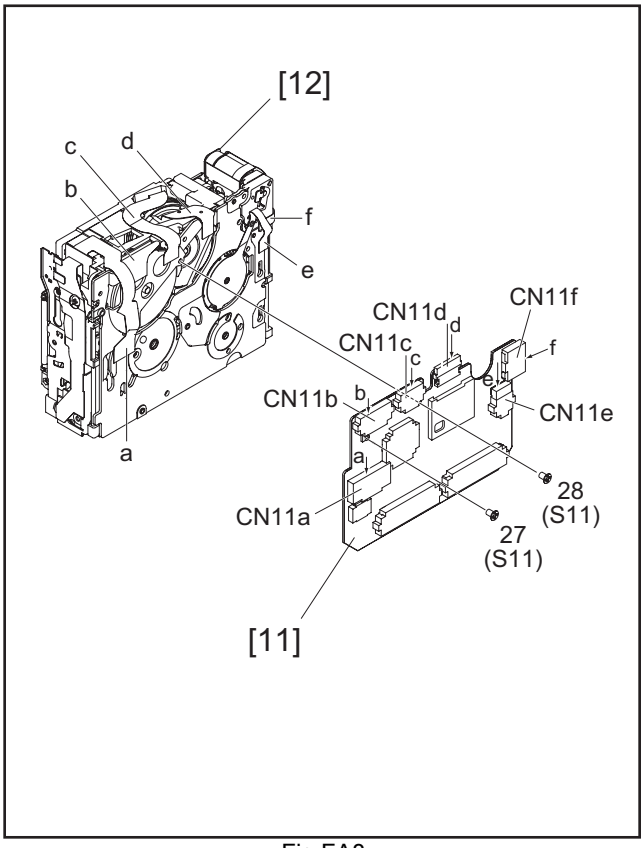


Fig.FA8

3.2.3 ASSEMBLY/DISASSEMBLY OF [2] MONITOR ASSEMBLY

●CAUTIONS

(1) Remove the MONITOR ASSEMBLY from the UPPER CASE ASSEMBLY first, as they are removed together in main parts disassembly, and then proceed to the disassembly procedure.

(2) During the procedure, be careful in handling the LCD MODULE and other parts. Pay special attention not to damage or soil the monitor screen.
If fingerprints are left on the screen, wipe them with clean chamois leather or a cleaning cloth.

(3) Since the BACKLIGHT is soldered to the BOARD ASSEMBLY (SD2), they should be removed together except for the replacement.

●Removing MONITOR ASSEMBLY

(1) Remove the screw (1), and remove the BKT (OPE).

(2) Remove the two screws (2 and 3).

(3) Remove the screw (4), free the OPE BOARD ASSEMBLY, and pull out the FPC from the connector (CN2a).

NOTE2a:
Although the MONITOR ASSEMBLY can be removed with the FPC attached to the OPE BOARD ASSEMBLY, remove the OPE BOARD ASSEMBLY considering the workability and the cut/ break of FPC.

(4) Remove the two screws (5 and 6), and remove the COVER HINGE.

(5) Remove the two screws (7 and 8), and remove the MONITOR ASSEMBLY.

NOTE2b:
When removing, be careful not to damage the FPC ASSEMBLY.

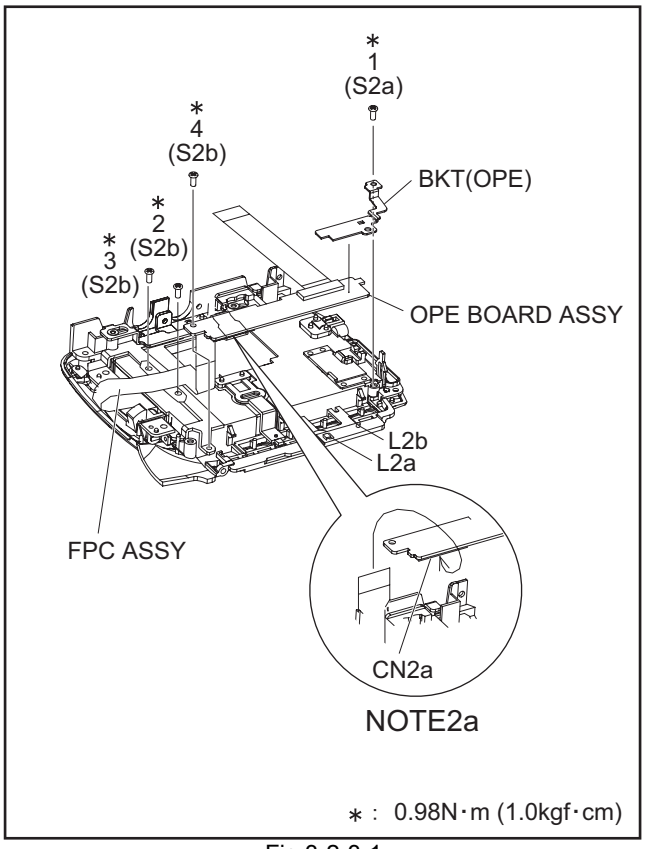


Fig.3-2-3-1

●Disassembly of MONITOR ASSEMBLY

(1) Remove the three screws (9-11), and remove the MONITOR COVER ASSEMBLY by disengaging the five hooks (L2c,d,e,f and g).

(2) Pull out the U/D SWITCH BOARD from the MONITOR CASE ASSEMBLY.

(3) Release the lock of the connector (CN2b), and remove the HINGE UNIT by lifting it up.

NOTE2c:
During the procedure, be careful in handling the FPC ASSEMBLY.

(4) Release the lock of the connector (CN2c), and pull out the FPC.

(5) Remove the screw (12).

(6) Remove the MONITOR BOARD ASSEMBLY and the BACK LIGHT together.

NOTE2d:
Since the BACKLIGHT is soldered to the BOARD ASSEMBLY (SD2), they should be removed together except for the replacement.

(7) Remove the DIFF. SHEET and the SPACER (LCD).

(8) Remove the LCD MODULE.

(9) Remove the SPRING (LCD), and remove the SHIELD CASE.

NOTE2e:
As the SPRING (LCD) is for the LCD MODULE positioning and holding, do not remove it if not needed.

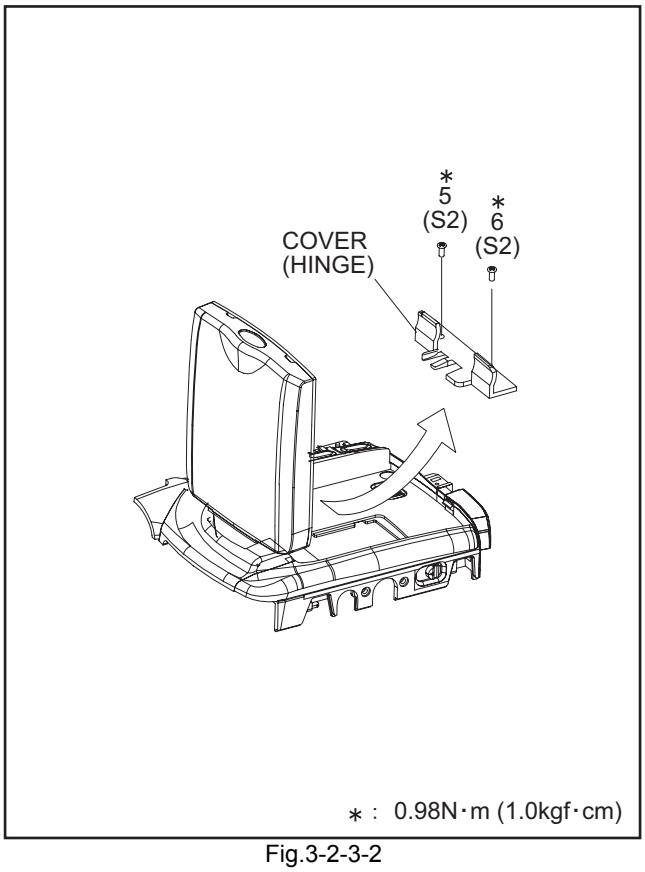


Fig.3-2-3-2

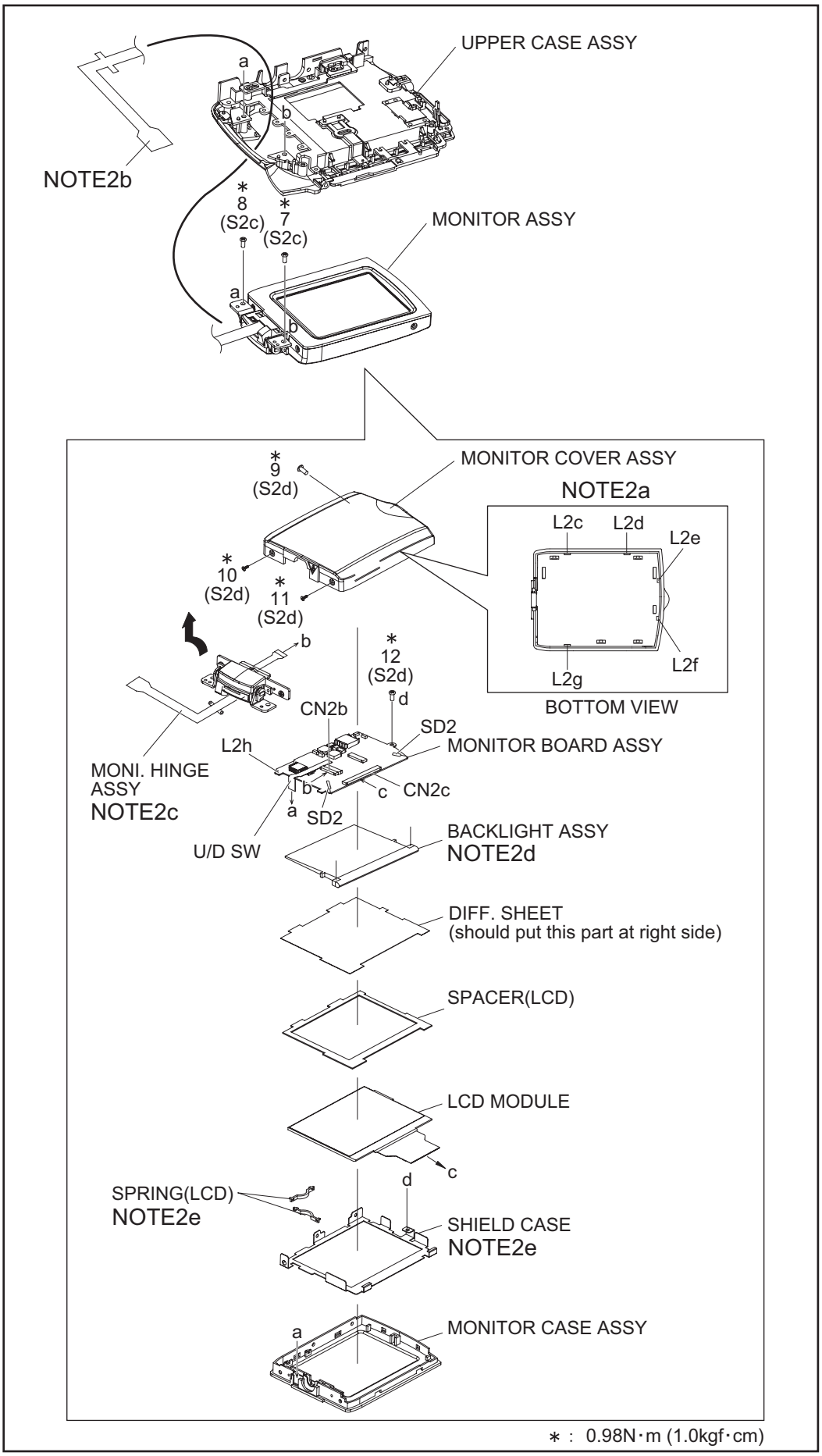

UPPER CASE ASSY
a
b
NOTE2b
*8 (S2c)
*7 (S2c)
MONITOR ASSY
a
b
*9 (S2d)
MONITOR COVER ASSY
NOTE2a
L2c
L2d
L2e
L2f
L2g
BOTTOM VIEW
*10 (S2d)
*11 (S2d)
b
*12 (S2d)
d
CN2b
SD2
L2h
MONITOR BOARD ASSY
MONI. HINGE ASSY
NOTE2c
b
c
CN2c
a
SD2
U/D SW
BACKLIGHT ASSY
NOTE2d
DIFF. SHEET
(should put this part at right side)
SPACER(LCD)
LCD MODULE
c
d
SPRING(LCD)
NOTE2e
SHIELD CASE
NOTE2e
a
MONITOR CASE ASSY
* : 0.98N·m (1.0kgf·cm)

Fig.3-2-3-3

3.2.4 ASSEMBLY/DISASSEMBLY OF [7] OP BLOCK ASSMBLY/CCD BOARD ASSEMBLY

●Precautions

(1) Take care in handling the CCD IMAGE SENSOR, OP LPF and lens components when performing maintenance etc., especially with regard to surface contamination, attached dust or scratching. If fingerprints are present on the surface they should be wiped away using either a silicon paper, clean chamois or the cleaning cloth.

(2) The CCD IMAGE SENSOR may have been shipped with a protective sheet attached to the transmitting glass. When replacing the CCD IMAGE SENSOR, do not peel off this sheet from the new part until immediately before it is mounted in the OP BLOCK ASSEMBLY.

(3) The orientation of the OP LPF is an important factor for installation. If there is some marking on the OP LPF, be sure to note it down before removing and to reassemble it very carefully as it was referring to the marking.

●Disassembly of CCD BOARD ASSEMBLY and CCD BASE ASSEMBLY

(1) Unsolder the CCD BOARD ASSEMBLY by the 14 points (SD7a) and then remove it.

(2) Remove the two screws (1, 2) and remove the CCD BASE ASSEMBLY.

(3) Remove the SPACER.

(4) Remove the SHEET.

(5) Remove the OP LPF.

●Assembly of CCD BASE ASSEMBLY and CCD BOARD ASSEMBLY

(1) Set the OP LPF to the OP BLOCK ASSEMBLY so that the OP side touches the OP BLOCK ASSEMBLY.

NOTE7a:

Pay careful attention to the orientation of the OP LPF.

(2) Set the SHEET to the OP LPF not to come off the right position.

(3) Attach the SPACER to the OP BLOCK ASSEMBLY.

(4) Fasten them together with the two screws (1, 2).

(5) Set the CCD BOARD ASSEMBLY in the CCD BASE ASSEMBLY, and then solder it by the 14 points (SD7a).

●Replacement of service repair parts

The service repair parts for the OP BLOCK ASSEMBLY are as listed below.

Before replacement of these parts, remove the BRACKET (OP BLOCK ASSEMBLY) as required.

Take special care not to disconnect any of the FPC wires or cause any damage due to soldering (excessive heating).

(1) FOCUS MOTOR UNIT

(2) ZOOM MOTOR UNIT

(3) AUTO IRIS UNIT

NOTE 7b:

When replacing the FOCUS MOTOR UNIT or the ZOOM MOTOR UNIT, solder the FPC at a space of about 1 mm above the terminal pin.

NOTE 7c:

The AUTO IRIS UNIT includes the FPC ASSEMBLY and two sensors.

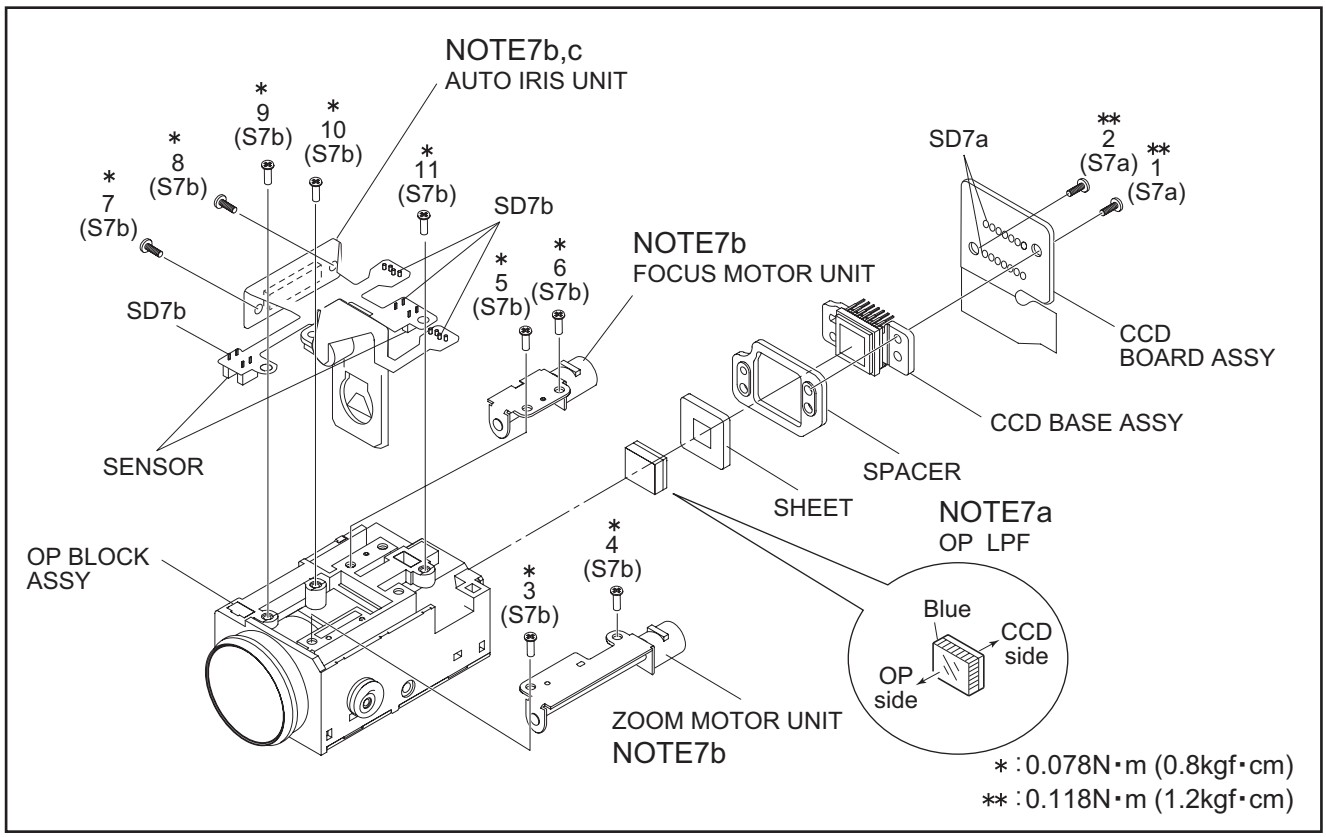


Fig.3-2-4

3.2.5 ASSEMBLY/DISASSEMBLY OF [3] VF ASSEMBLY

●Before disassembly

As the VF ASSEMBLY has complicated structure, do not disassemble if not needed.

Inside the VF is divided into two units: LCD SA/ LENS SA, and each unit is made up of several parts.

Disassemble the VF ASSEMBLY if necessary. When assembling the VF ASSEMBLY,

When assembling the VF ASSEMBLY, pay special attention to the foreign materials (dusts etc.) inside the ASSEMBLY, and the soils on both the LENS and the SHEET.

●Disassembly of the CABINET PARTS

(1) Remove the screw (1), and free the SW BOARD ASSY.

(2) Remove the two screws (2 and 3), and remove the VF ASSEMBLY.

NOTE3a:

During the procedure, be careful not to break the FPC.

(3) Remove the two screws (4 and 5), and remove the UPPER CASE (VF).

(4) Remove the FPC from the BOTTOM CASE (VF) to make the FPC free, and remove the LCD SA/LENS SA.

NOTE3b:

During the procedure, be careful not to break the FPC.

NOTE3c:

When attaching, be careful with the positioning of the LEVER (VF) and the handling of the FPC.

●Disassembly of LCD SA/LENS SA

(1) Remove the two hooks (L3c and d) on the both sides, and remove the LENS SA from the LCD SA.

NOTE3d:

Refer to the Fig.VF2 for the disassembly of the LCD SA and the LENS SA, do not disassemble unless it is needed.

NOTE3e:

During the procedure, be careful in handling the parts. Pay special attention not to damage, soil, or leave fingerprints on the surface.

NOTE3f:

When attaching the LEVER VF, be careful in positioning with the LENS ASSY. Attach the LEVER VF by pulling the LENS ASSY to the EYE CUP side.

After the attachment, check whether the sliding operation is smooth.

NOTE3g:

When disassembling, be careful not to lose any parts.

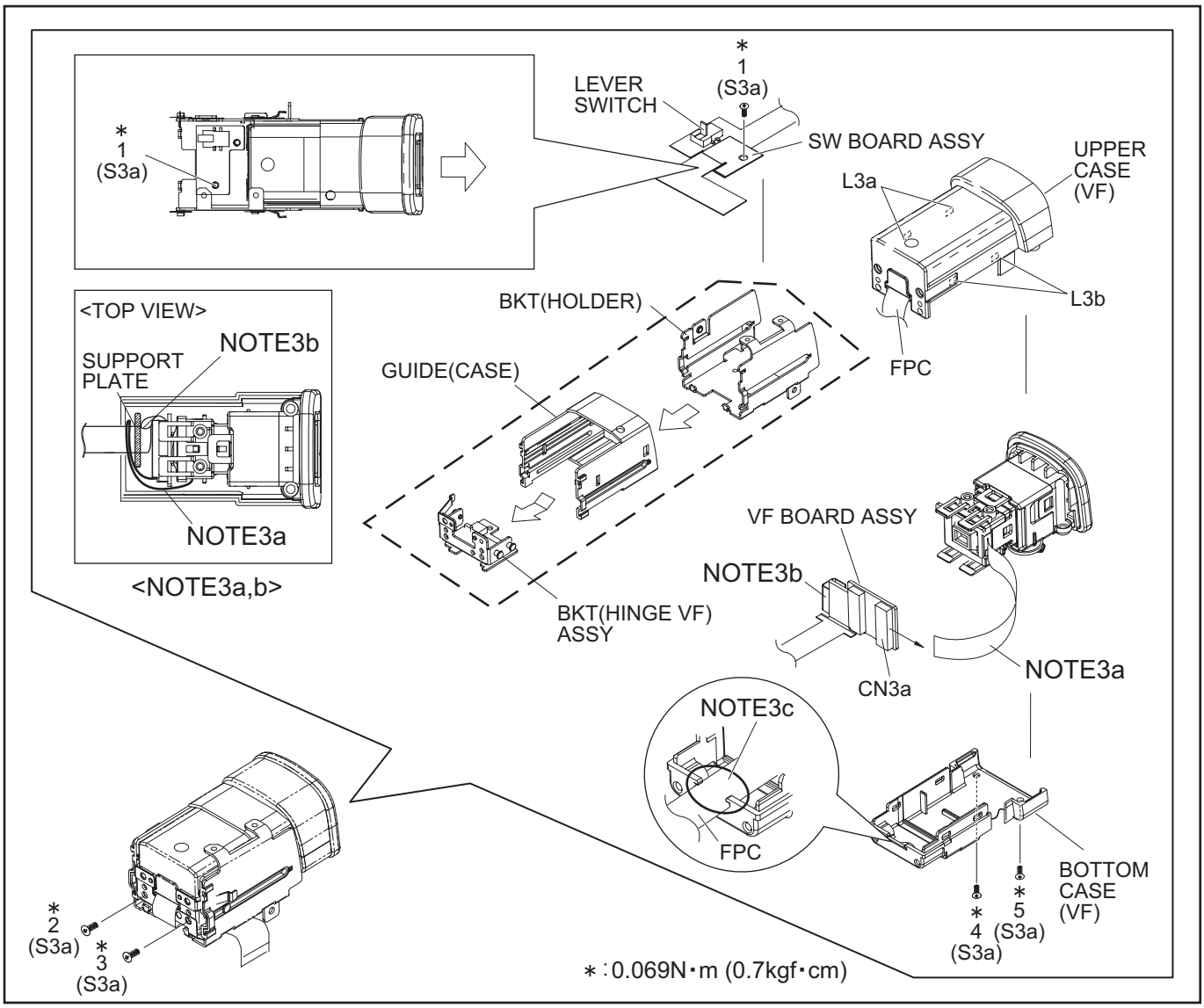


Fig.VF1

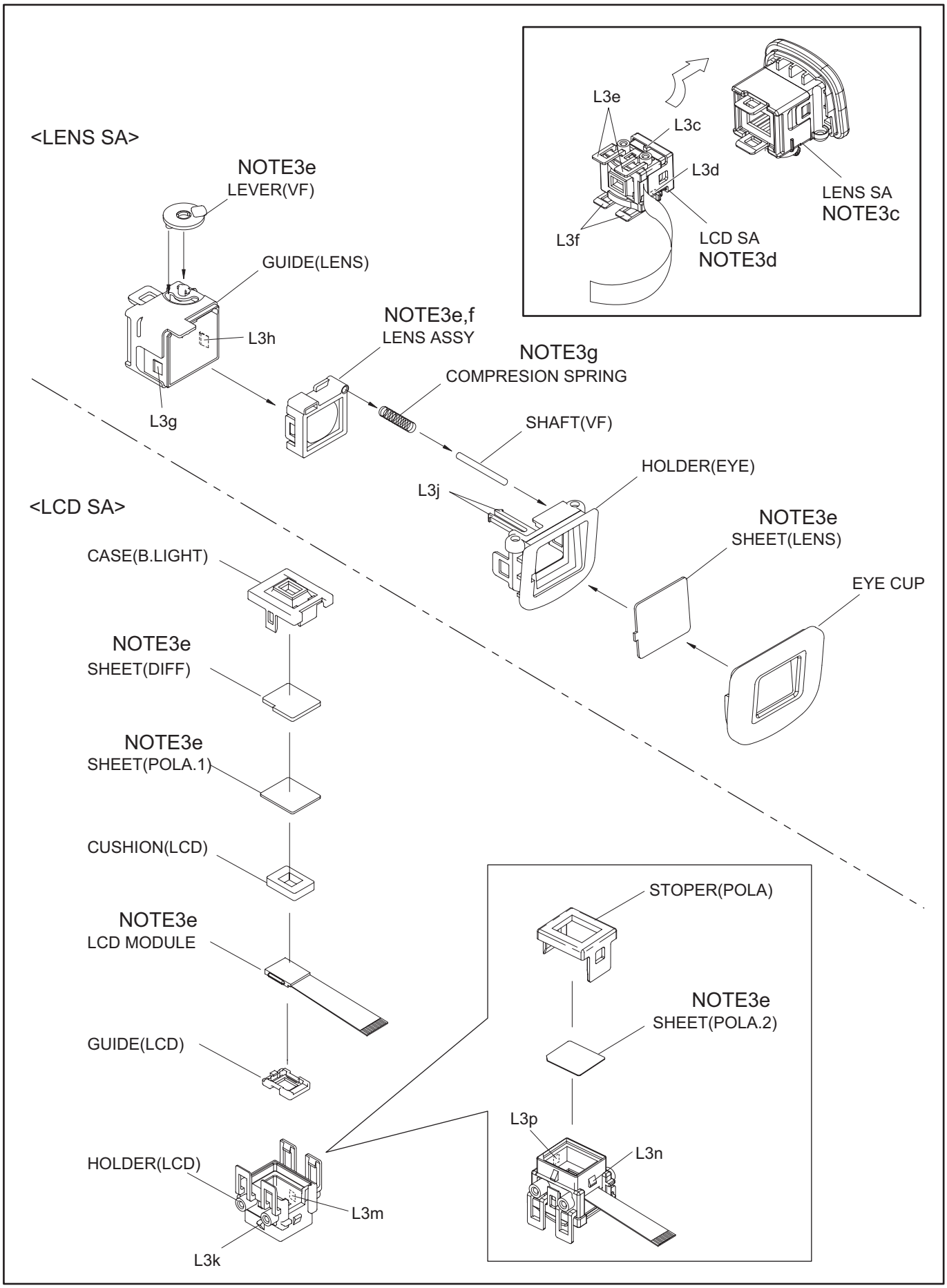

<LENS SA>
NOTE3e
LEVER(VF)
GUIDE(LENS)
L3h
L3g
NOTE3e,f
LENS ASSY
NOTE3g
COMPRESION SPRING
SHAFT(VF)
HOLDER(EYE)
L3j
L3e
L3c
L3d
L3f
LENS SA
NOTE3c
LCD SA
NOTE3d
<LCD SA>
CASE(B.LIGHT)
NOTE3e
SHEET(DIFF)
NOTE3e
SHEET(POLA.1)
CUSHION(LCD)
NOTE3e
LCD MODULE
GUIDE(LCD)
HOLDER(LCD)
L3m
L3k
NOTE3e
SHEET(LENS)
EYE CUP
STOPER(POLA)
NOTE3e
SHEET(POLA.2)
L3p
L3n

Fig.VF2

SECTION 4
ADJUSTMENT

4.1 PREPARATION

4.1.1 Precaution

Camera system and deck system of this model are specially adjusted by using PC.
However, if parts such as the following are replaced, an adjustment is required. The adjustment must be performed in a Service Center equipped with the concerned facilities.

- EEP ROM (IC1005 of MAIN board)
- OP BLOCK ASSEMBLY

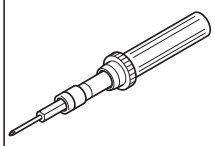
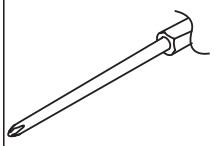
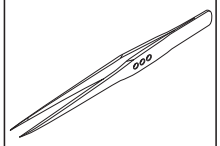
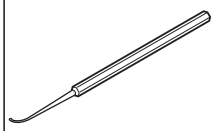
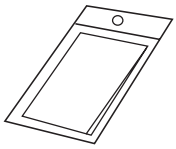
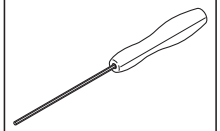
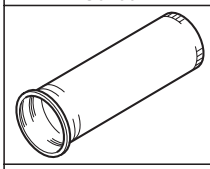
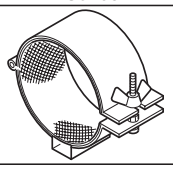
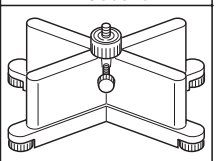
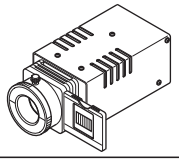
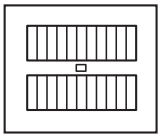
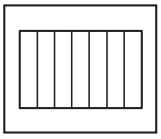
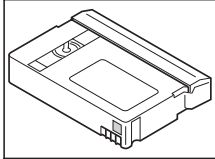
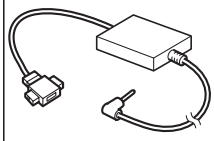
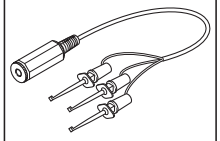
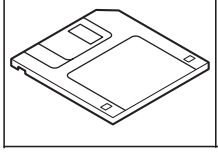
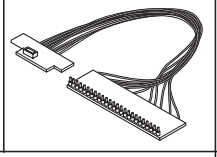
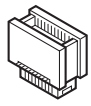
In the event of malfunction with electrical circuits, first find a defective portion with the aid of proper test instruments as shown in the following electrical adjustment procedure, and then commence necessary repair/ replacement/adjustment.

- In observing chip TP, use IC clips, etc. to avoid any stress. Prior to replacement of chip parts (especially IC), remove the solder completely to prevent peeling of the pattern.
- Use a patch cord if necessary. As for a patch cord, see the BOARD INTERCONNECTIONS.
- Since connectors are fragile, carefully handle them in disconnecting and connecting the FPC.

4.1.2 REQUIRED TEST EQUIPMENT

- Personal computer (for Windows)
- Color TV monitor
- Oscilloscope (dual-trace type, observable 100MHz or higher frequency). The one observable 300 MHz or higher frequency is recommended.
- Digital voltmeter
- DC power supply or AC adapter
- Frequency counter (with threshold level adjuster)

4.1.3 TOOLS REQUIRED FOR ADJUSTMENT

Torque Driver YTU94088	Bit YTU94088-003	Tweezers P-895
		
Chip IC Replacement Jig PTS40844-2	Cleaning Cloth KSMM-01	Guide Driver (Hexagonal) D-770-1.27
		
INF Adjustment Lens YTU92001B	INF Adjustment Lens Holder YTU94087	Camera Stand YTU93079
		
Light box Assembly YTU93096A	Gray Scale Chart YTU94133A	Color Bar Chart YTU94133C
		
Alignment Tape MC-2	PC Cable QAM0099-005	Communication Cable YTU93107A
		
Service Support System YTU94057-85	Jig Connector Cable YTU93106C	Extension Connector YTU94145D-40
		
		Extension Connector YTU94145E-40
		

- **Torque driver**
  Be sure to use to fastening the mechanism and exterior parts because those parts must strictly be controlled for tightening torque.
- **Bit**
  This bit is slightly longer than those set in conventional torque drivers.
- **Tweezers**
  To be used for removing and installing parts and wires.

- **Chip IC replacement jig**
  To be used for adjustment of the camera system.
- **Cleaning cloth**
  Recommended the Cleaning cloth to wipe down the video heads, mechanism (tape transport system), optical lens surface.
- **Guide driver (Hexagonal)**
  To be used to turn the guide roller to adjustment of the linarity of playback envelope.
- **INF adjustment lens**
  To be used for adjustment of the camera system. For the usage of the INF adjustment lens, refer to the Service Bulletin No. YA-SB-10035.
- **INF adjustment lens holder**
  To be used together with the Camera stand for operating the Videocamera in the stripped-down condition such as the status without the exterior parts or for using commodities that are not yet conformable to the interchangeable ring. For the usage of the INF lens holder, refer to the Service Bulletin No. YA-SB-10035.
- **Camera stand**
  To be used together with the INF adjustment lens holder. For the usage of the Camera stand, refer to the Service Bulletin No. YA-SB-10035.
- **Light box assembly**
  To be used for adjustment of the camera system. For the usage of the Light box assembly, refer to the Service Bulletin No. YA-SB-10035.
- **Gray scale chart**
  To be used for adjustment of the camera system. For the usage of the INF adjustment lens, refer to the Service Bulletin No. YA-SB-10035.
- **Color bar chart**
  To be used for adjustment of the camera system. For the usage of the INF adjustment lens, refer to the Service Bulletin No. YA-SB-10035.
- **Alignment tape**
  To be used for check and adjustment of interchangeability of the mechanism.
- **PC cable**
  To be used to connect the Videocamera and a personal computer with each other when a personal computer issued for adjustment.
- **Communication cable**
  Connect the Communication cable between the PC cable and Jig connector cable when performing a PC adjustment.
- **Service support system**
  To be used for adjustment with a personal computer. Software can be downloaded also from JS-net.
- **Jig connector cable**
  Connected to JIG CONNECTOR of the main board and used for electrical adjustment, etc.
- **Extension connector**
  Connect this extension connector to the connector of the Jig connector cable for extending the cable connector.

4.2 JIG CONNECTOR CABLE CONNECTION

■ **Connection procedure**

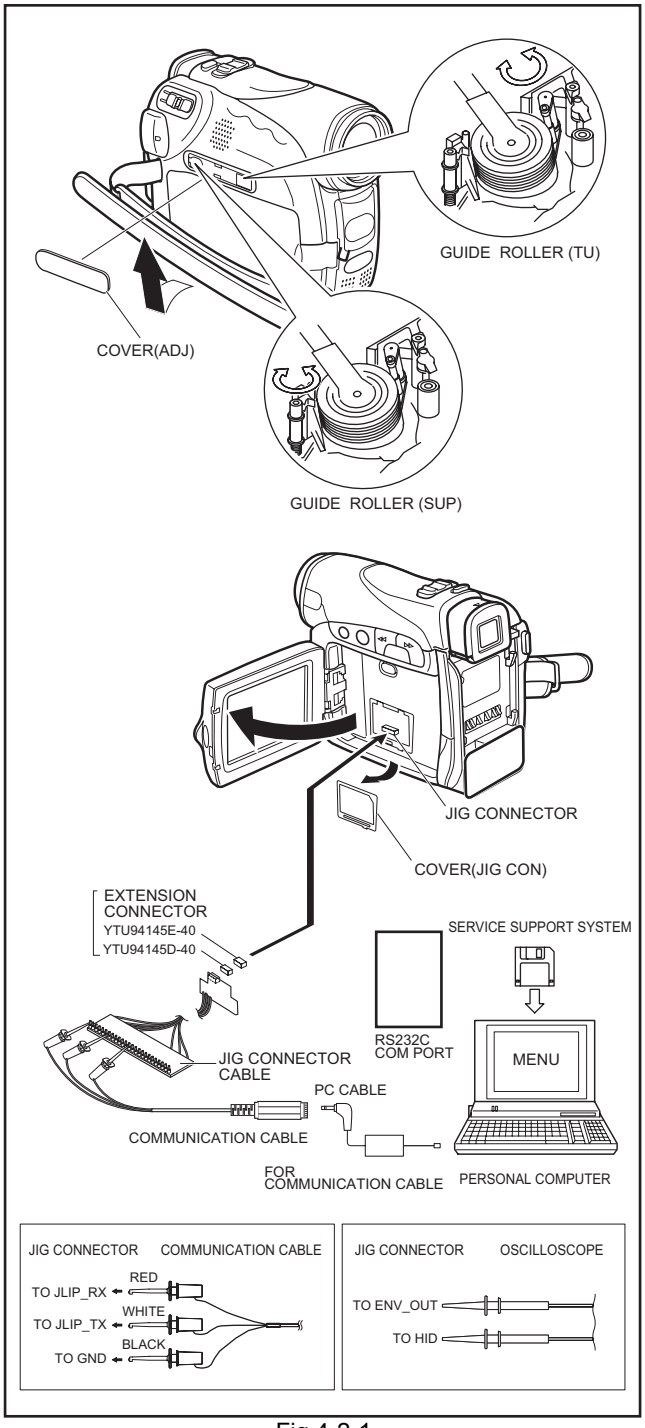


Fig.4-2-1

■ **Jig connector diagrams**

JIG CONNECTOR CABLE (YTU93106C)

MAIN CN113			JIG CONN. BOARD (PIN NO.)	
EXMOD_1	1		1	EXMOD_1
SYS_TMS		21	2	SYS_TCK
SYS_TCK	2		3	SYS_TRSTL
SYS_TDI		22	4	SYS_RSTL
SYS_TRSTL	3		5	IF_TX
SYS_TDO		23	6	JLIP_RX
SYS_RSTL	4		7	RXD2
AL_3VSYS		24	8	I_MTR
IF_TX	5		9	NC
JLIP_TX		25	10	MAIN_VCO
JLIP_RX	6		11	HID
TXD2		26	12	FS_PLL
RXD2	7		13	MON_B
NC		27	14	MON_B
I_MTR	8		15	GND
NC		28	16	HRP
NC	9		17	CVF_R
ENV_OUT		29	18	GND
MAIN_VCO	10		19	NC
ATFI		30	20	KENTO
HID	11		21	SYS_TMS
DISCRI		31	22	SYS_TDI
FS_PLL	12		23	SYS_TDO
HST		32	24	AL_3VSYS
MON_B	13		25	JLIP_TX
MON_R		33	26	TXD2
MON_B	14		27	NC
GND		34	28	NC
GND	15		29	ENV_OUT
V_OUT		35	30	ATFI
HRP	16		31	DISCRI
CVF_B		36	32	HST
CVF_R	17		33	MON_R
CVF_G		37	34	GND
GND	18		35	V_OUT
NC		38	36	CVF_B
NC	19		37	CVF_G
DSC_DBG		39	38	NC
KENTO	20		39	DSC_DBG
MVD		40	40	MVD

Fig.4-2-2

4.3 MECHANISM COMPATIBILITY ADJUSTMENT

4.3.1 Tape pattern adjustment

NOTE:

Prior to the adjustment, remove the COVER (ADJ).

(1) Play back the compatibility adjustment tape.
(2) While triggering the HID, observe the waveform of ENV_OUT.
(3) Set the manual tracking mode (ATF OFF).
(4) Confirm that the waveform is entirely parallel and straight, and free from remarkable level-down, through the tracking operation.
Make the confirmation as follows if necessary.
(5) If level-down is observed on the left hand side of the waveform, straighten the level by turning the GUIDE ROLLER (SUP).
If level-down is observed on the right hand side of the waveform, straighten the
level by turning the GUIDE ROLLER (TU).
(6) After the adjustment, try the unloading motion once, and confirm that the waveform is flat when the tape has been played back again.
(7) Play back the self-recording.
(8) Confirm that the waveform is flat.

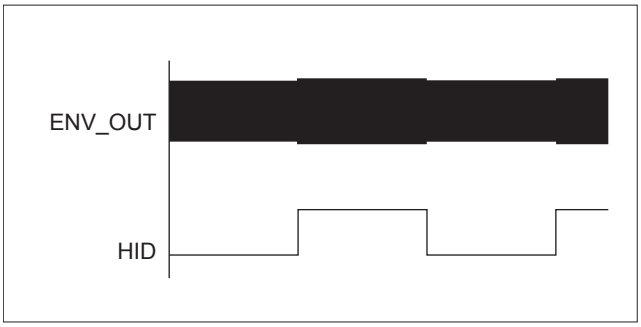


Fig.4-3-1

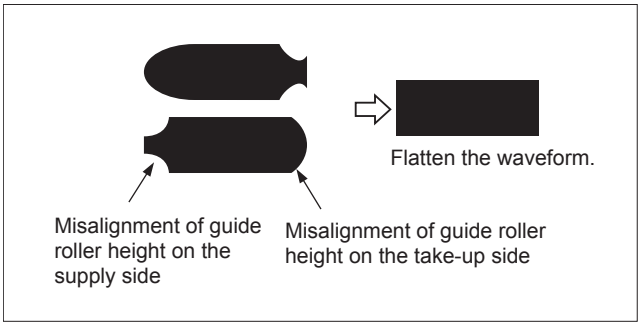

Flatten the waveform.
Misalignment of guide roller height on the supply side
Misalignment of guide roller height on the take-up side

Fig.4-3-2

4.4 ELECTRICAL ADJUSTMENT

Electrical adjustment is performed by using a personal computer and software for SERVICE SUPPORT SYSTEM. Read README.TXT file to use the software properly.
As for the connection of cables, see "4.2 JIG CONNECTOR CABLE CONNECTION".

CABINET PARTS AND ELECTRICAL PARTS(1)

Symbol No.	[1]			[2]							[3]				[4]		[5]	[6]		
Removing order of screw	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	-	18	19	20
Place to stick screw	*	*	*		*	*	*	*	*	*	*	*	*	*	*	*	*	-	*		
Reference drawing (Fig.No.)	FA1			FA2								FA3						FA4	FA5-1	FA5-2	
Screw tightening torque	a																	-	a		

CABINET PARTS AND ELECTRICAL PARTS(2)

Symbol No.	[7]	[8]	[9]			[10]		[11]		[12]
Removing order of screw	-	21	22	23	24	25	26	27	28	-
Place to stick screw	-	*								-
Reference drawing (Fig.No.)	FA5-1	FA6	FA7					FA8		
Screw tightening torque	-	a	b			c		a		-

[2] MONITOR ASSY

	[2]											
Removing order of screw	1	2	3	4	5	6	7	8	9	10	11	12
Place to stick screw		*	*	*	*	*	*	*	*	*	*	*
Reference drawing (Fig.No.)	3-2-3-1				3-2-3-2			3-2-3-3				
Screw tightening torque	d											

[3] VF ASSY

	[3]				
Removing order of screw	1	2	3	4	5
Place to stick screw	*				
Reference drawing (Fig.No.)	VF1				
Screw tightening torque	c				

[7] OP BLOCK ASSY / CCD BOARD ASSY

	[7]										
	1	2	3	4	5	6	7	8	9	10	11
	3-2-4										
	e	b									

NOTE:

1）* (This mark shows where to attach the screws) : Do not reuse the screws because the screw lock bond was applied to prevent the screws from loosening. Prepare the specified screws and use them in place of the removed screws.

2）Tightening torque for the screws

・There are setting limits of the torque value for the torque driver. If the value exceeds the setting value, take it as a rough measurement (reference value), and tighten the screw manually.

・The specified torque value is a recommended value of the initial assembly. Therefore, set the value below the specified torque value in the assembling procedure. Be careful not to break either the screws or the screw holes.

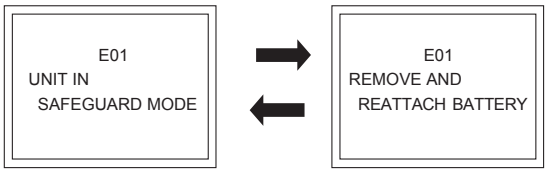
a : 0.092N・m (0.94kgf・cm)　b : 0.078N・m (0.8kgf・cm)　c : 0.069N・m (0.7kgf・cm)　d : 0.098N・m (1.0kgf・cm)　e : 0.118N・m (1.2kgf・cm)

5.2 EMERGENCY DISPLAY

Whenever some abnormal signal is input to the syscon CPU, an error number (E01, as an example) is displayed on the LCD monitor or (in the electronic view finder).In every error status, such the message as shown below alter nately appear over and over.

- In an emergency mode, all operations except turning on/off the POWER switch are ineffectual.

Example (in case of the error number E01):



LCD display	Emergencymode	Details	Possible cause
E01	LOADING	In the case the encoder position is not shifted to the next point though the loading motor has rotated in the loading direction for 4 seconds or more. This error is defined as [E01].	1. The mechanism is locked during mode shift. 2. The mechanism is locked at the mechanism loading end, because the encoder position is skipped during mechanism mode shift. 3. No power is supplied to the loading MDA.
E02	UNLOADING	In the case the encoder position is not shifted to the next point though the loading motor has rotated in the unloading direction for 4 seconds or more. This error is defined as [E02].	1. The mechanism is locked during mode shift. 2. The mechanism is locked at the mechanism loading end, because the encoder position is skipped during mechanism mode shift.
E03	TU & SUP REEL FG	In the case no REEL FG is produced for seconds shown in the table below or more in the capstan rotation mode after loading was complete, the mechanism mode is shifted to STOP with the pinch roller set off. This error is defined as [E03].However, no REEL EMG is detected in the SLW/STILL mode. PB/REC: 3 SEC / 3 SEC S-FWD: 3 SEC / 0.3 SEC S-REW: 0.3 SEC / 3 SEC FF: 3 SEC / 0.1 SEC REW: 0.1 SEC / 3 SEC	1. The idler gear does not engage with the reel disk well. 2. Though the idler gear and reel disk are engaged with each other, the tape is not wound because of overload to the mechanism. 3. No FG pulse is output from the reel sensor. 4. No power is supplied to the reel sensor. 5. Tape transport operation takes place with a cassette having no tape inside. 6. The tape slackens and no pulse is produced until the slack is taken up and the tape comes into the normal status.
E04	DRUM FG	In the case there is no DRUM FG input in the drum rotation mode for 4 seconds or more. This error is defined as [E04], and the mechanism mode is shifted to STOP with the pinch roller set off.	1. The drum cannot be started or drum rotation is stopped because tape transport load is too high. 1) Tape tension is extremely high. 2) The tape is damaged or soiled with grease, etc. 2. The DRUM FG signal is not received by the syscon CPU. 1) Disconnection in the middle of the signal line. 2) Failure of the DRUM FG pulse generator (hall element). 3. No drum control voltage is supplied to the MDA. 4. No power is supplied to the DRUM MDA.
E05	-	-	-
E06	CAPSTAN FG	In the case no CAPSTAN FG is produced in the capstan rotation mode for 2 seconds or more. This error is defined as [E06], and the mechanism mode is shifted to STOP with the pinch roller set off.However, no CAPSTAN EMG is detected in the STILL/FF/REW mode.	1. The CAPSTAN FG signal is not received by the syscon CPU. 1) Disconnection in the middle of the signal line. 2) Failure of the CAPSTAN FG pulse generator (MR element). 2. No capstan control voltage is supplied to the MDA. 3. The capstan cannot be started or capstan rotation is stopped because tape transport load is too high. 1) Tape tension is extremely high. (Mechanical locking) 2) The tape is damaged or soiled with grease, etc. (Tape tangling occurs, etc.)

Fig.5-2-1

JVC

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AV & MULTIMEDIA COMPANY CAMCORDER CATEGORY 12, 3-chome, Moriya-cho, kanagawa-ku, Yokohama, kanagawa-prefecture, 221-8528, Japan

(No.YF080)

Printed in Japan
VPT

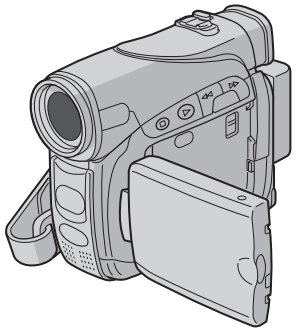
JVC

SCHEMATIC DIAGRAMS

DIGITAL VIDEO CAMERA

GR-D270EK, GR-D270EX, GR-D270EY, GR-D270EZ, GR-D290EK, GR-D290EX, GR-D290EY, GR-D290EZ

CD-ROM No.SML200502



Mini DV PAL

SD

MultiMediaCard

GR-D270EK, GR-D270EX,
GR-D270EY, GR-D270EZ[M5D2S5]
GR-D290EK, GR-D290EX,
GR-D290EY, GR-D290EZ[M5D2S7]

For disassembling and assembling of MECHANISM ASSEMBLY, refer to the SERVICE MANUAL No.86700(MECHANISM ASSEMBLY).

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No.YF080SCH
2005/2

CHARTS AND DIAGRAMS

NOTES OF SCHEMATIC DIAGRAM

Safety precautions
The Components indentified by the symbol ⚠ are critical for safety. For continued safety, replace safety critical components only with manufacturer's recommended parts.

1. Units of components on the schematic diagram

Unless otherwise specified.

1) All resistance values are in ohm. 1/6 W, 1/8 W (refer to parts list).
   Chip resistors are 1/16 W.
   K: KΩ(1000Ω), M: MΩ (1000KΩ)
2) All capacitance values are in μF, (P: PF).
3) All inductance values are in μH, (m: mH).
4) All diodes are 1SS133, MA165 or 1N4148M (refer to parts list).

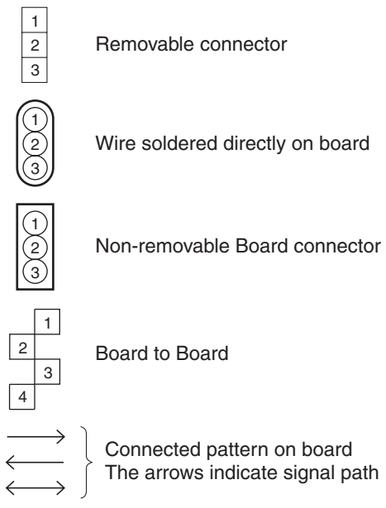
Note: The Parts Number, value and rated voltage etc. in the Schematic Diagram are for references only. When replacing the parts, refer to the Parts List.

2. Indications of control voltage

AUX : Active at high.

$\overline{AUX}$ or AUX(L) : Active at low.

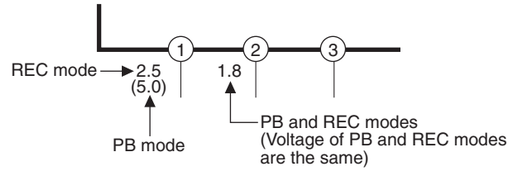
3. Interpreting Connector indications



Note: For the destination of each signal and further line connections that are cut off from the diagram, refer to "BOARD INTERCONNECTIONS"

4. Voltage measurement

1) Regulator (DC/DC CONV) circuits
   REC : Colour bar signal.
   PB : Alignment tape (Colour bar).
   — : Unmeasurable or unnecessary to measure.
2) Indication on schematic diagram
   Voltage indications for REC and PB mode on the schematic diagram are as shown below.



Note: If the voltages are not indicated on the schematic diagram, refer to the voltage charts.

5. Signal path Symbols

The arrows indicate the signal path as follows.

NOTE : The arrow is DVC unique object.

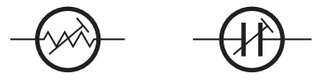
- Playback signal path
- Playback and recording signal path
  (including E-E signal path)
- Capstan servo path
- Drum servo path

(Example)

- R-Y Playback R-Y signal path
- Y Recording Y signal path

6. Indication of the parts for adjustments

The parts for the adjustments are surrounded with the circle as shown below.



7. Indication of the parts not mounted on the circuit board

"OPEN" is indicated by the parts not mounted on the circuit board.

CIRCUIT BOARD NOTES

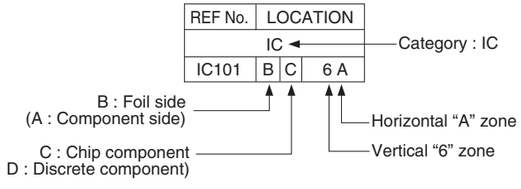
1. Foil and Component sides

1) Foil side (B side) :
   Parts on the foil side seen from foil face (pattern face) are indicated.
2) Component side (A side) :
   Parts on the component side seen from component face (parts face) indicated.

rts location are indicated by guide scale on the circuit board.

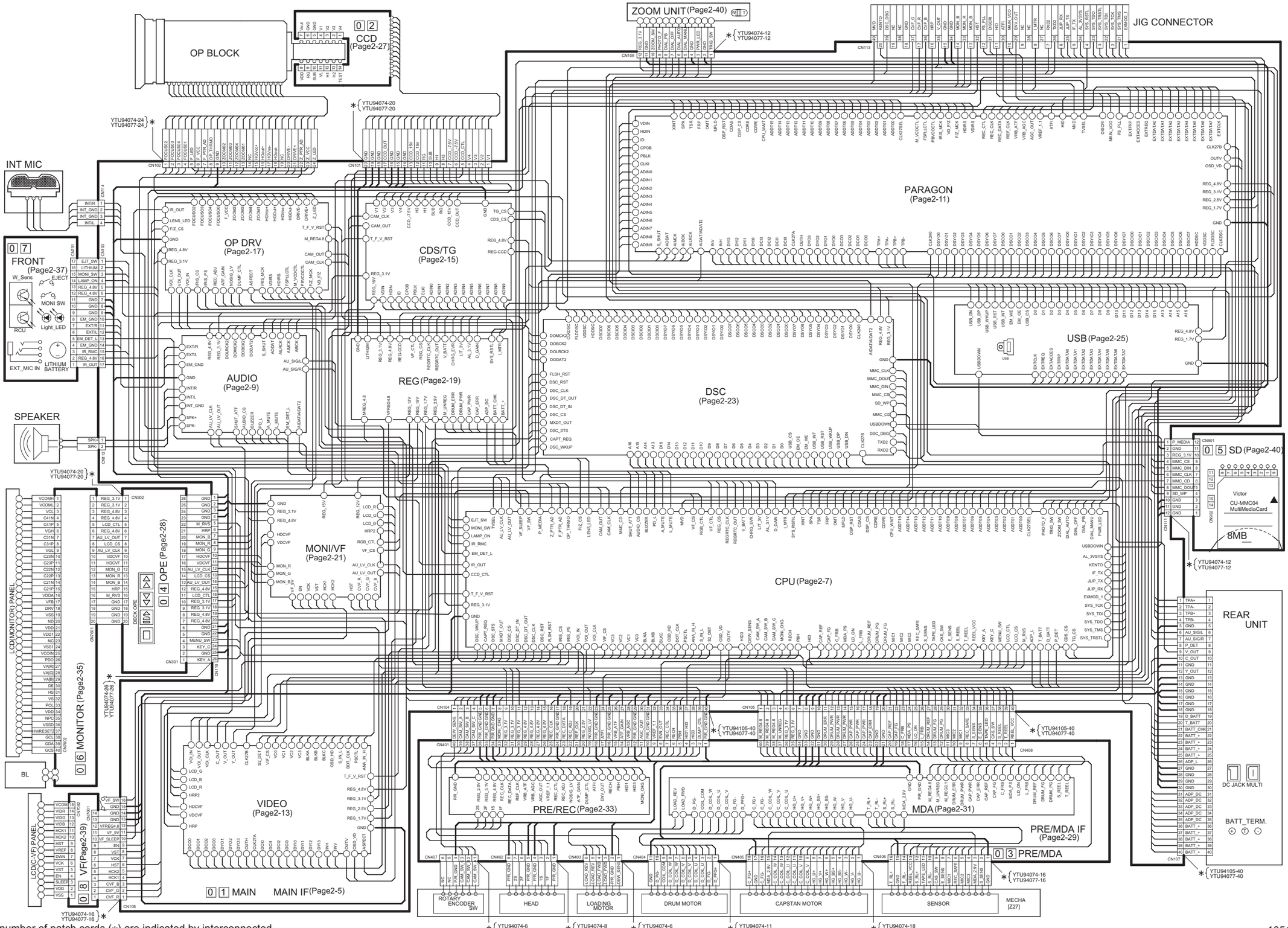
2. Parts location guides

Parts location are indicated by guide scale on the circuit board.



Note: For general information in service manual, please refer to the Service Manual of GENERAL INFORMATION Edition 4 No. 82054D (January 1994).

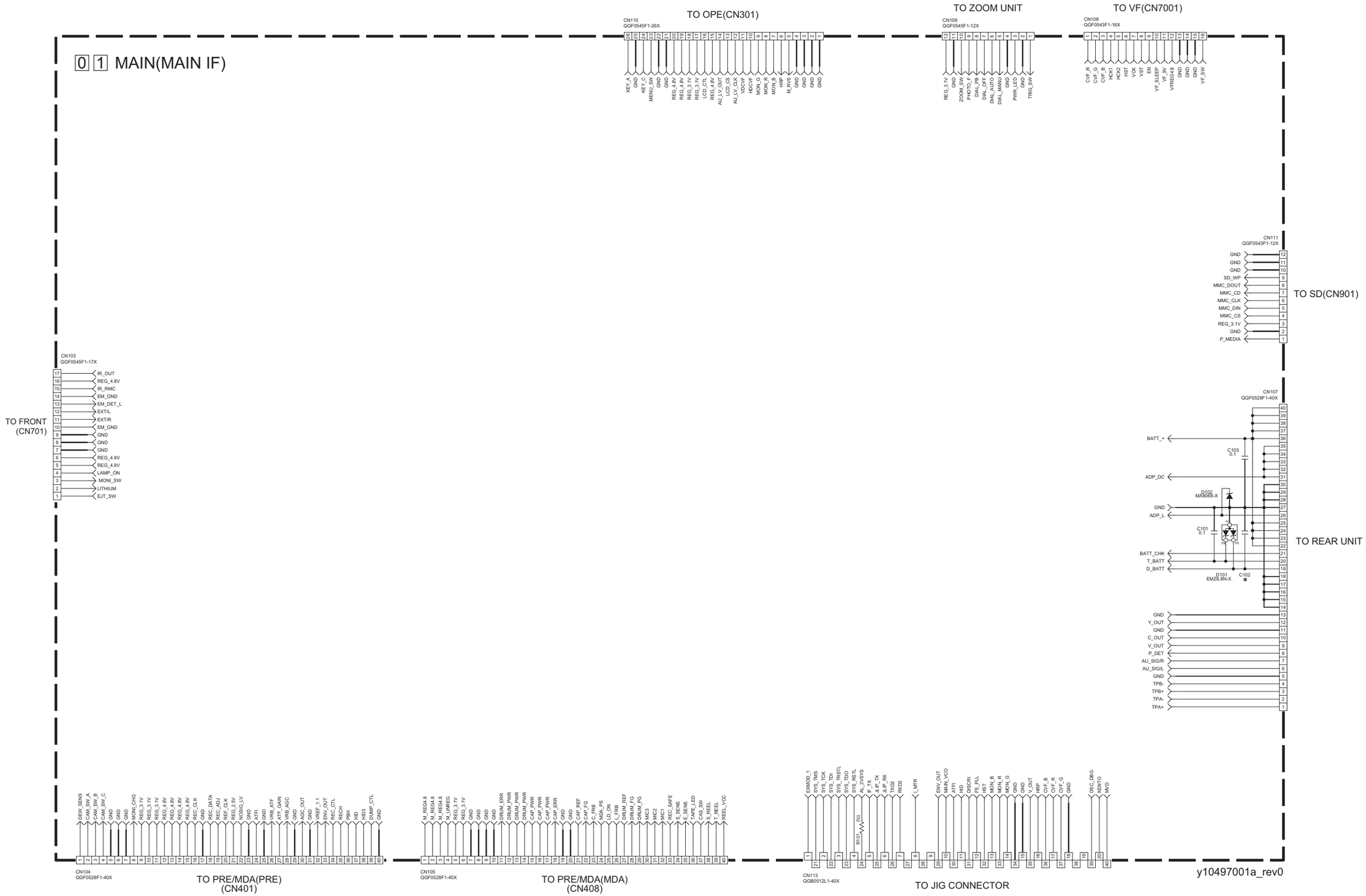
■ BOARD INTERCONNECTION



NOTE: The number of patch cords (*) are indicated by interconnected.

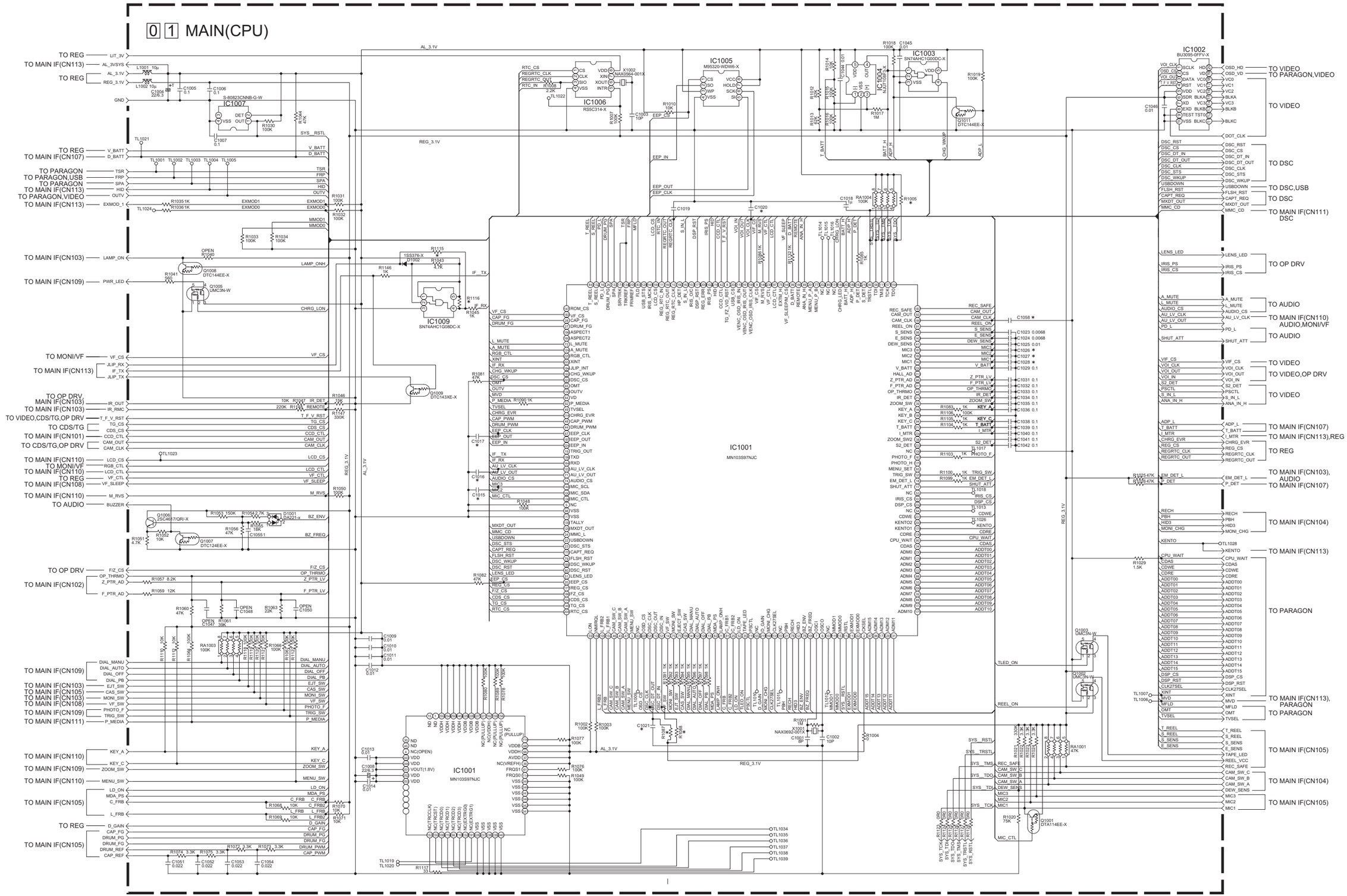
y10511001a_rev0

■ MAIN(MAIN IF) SCHEMATIC DIAGRAM

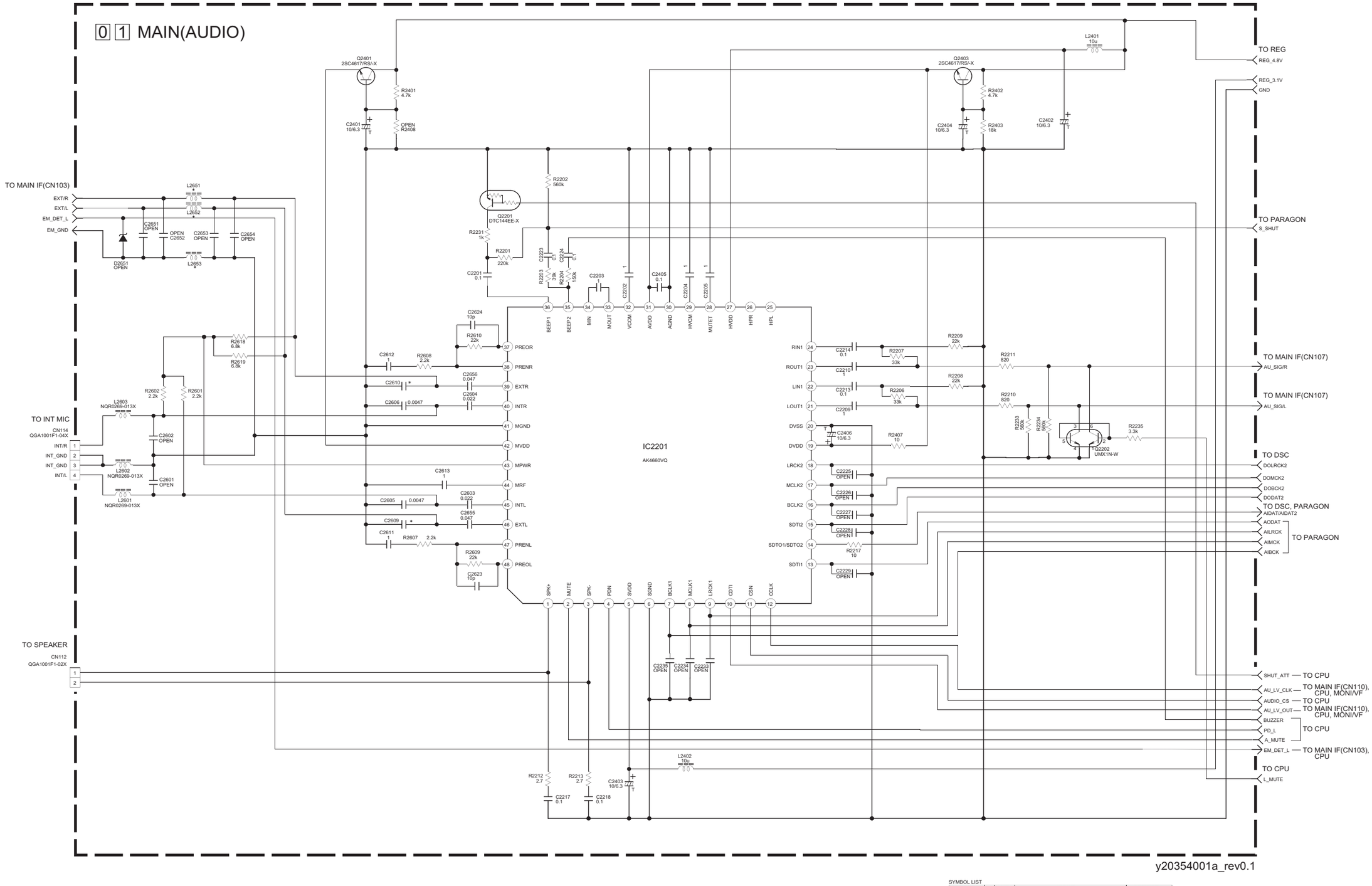


NOTES: 1. For the destination of each signal and further line connections that are cut off from this diagram, refer to "BOARD INTERCONNECTIONS".
2. The parts with marked (∗) is not used.

■ MAIN(CPU) SCHEMATIC DIAGRAM



■ MAIN(AUDIO) SCHEMATIC DIAGRAM



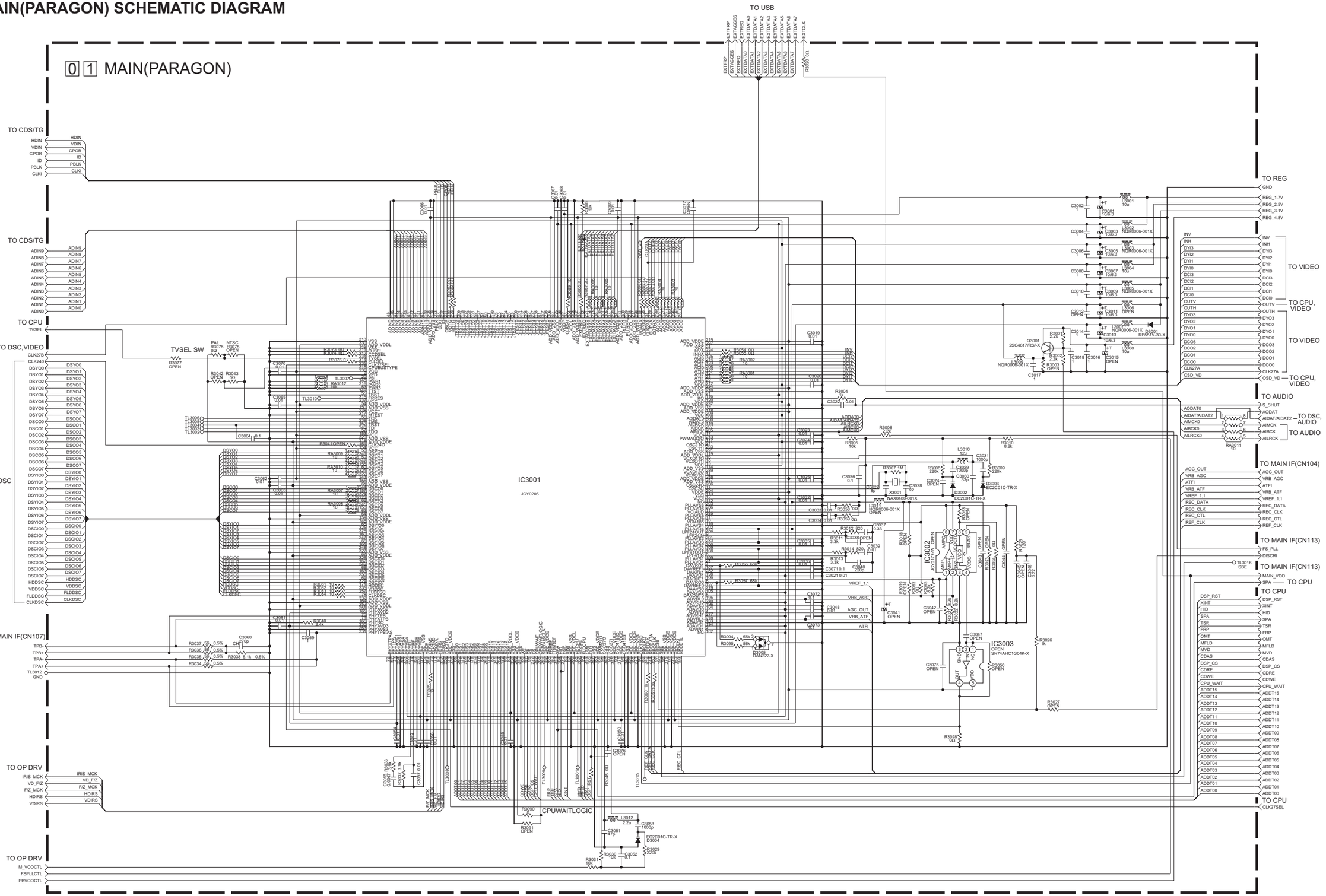
SYMBOL	JPNIE	PAL
L2651	OPEN	NQR0269-013
L2652	OPEN	NQR0269-013
L2653	OPEN	NQR0269-013
C2609	0Ω	0.0033μ
C2610	0Ω	0.0033μ

SYMBOL LIST

		LAST	VACANT	NO MOUNT
2200 (MAIN)	R	35	5.14~16.18~30.32	
	C	35	6~8.11.12.15.16.19~22.30~32	25~29.33~35
	Q	2		
2400 (REG)	R	8	4~6	8
	C	6		
	L	2		
	Q	3	2	
2600 (INT MIC)	R	19	3~6.11~17	
	C	24	7.8.14~22	1.2
	L	3		
2650 (EXT MIC)	C	56		51~54
	L	53		
	D	51		51

NOTES: 1. For the destination of each signal and further line connections that are cut off from this diagram, refer to "BOARD INTERCONNECTIONS".
2. The parts with marked (∗) is not used.

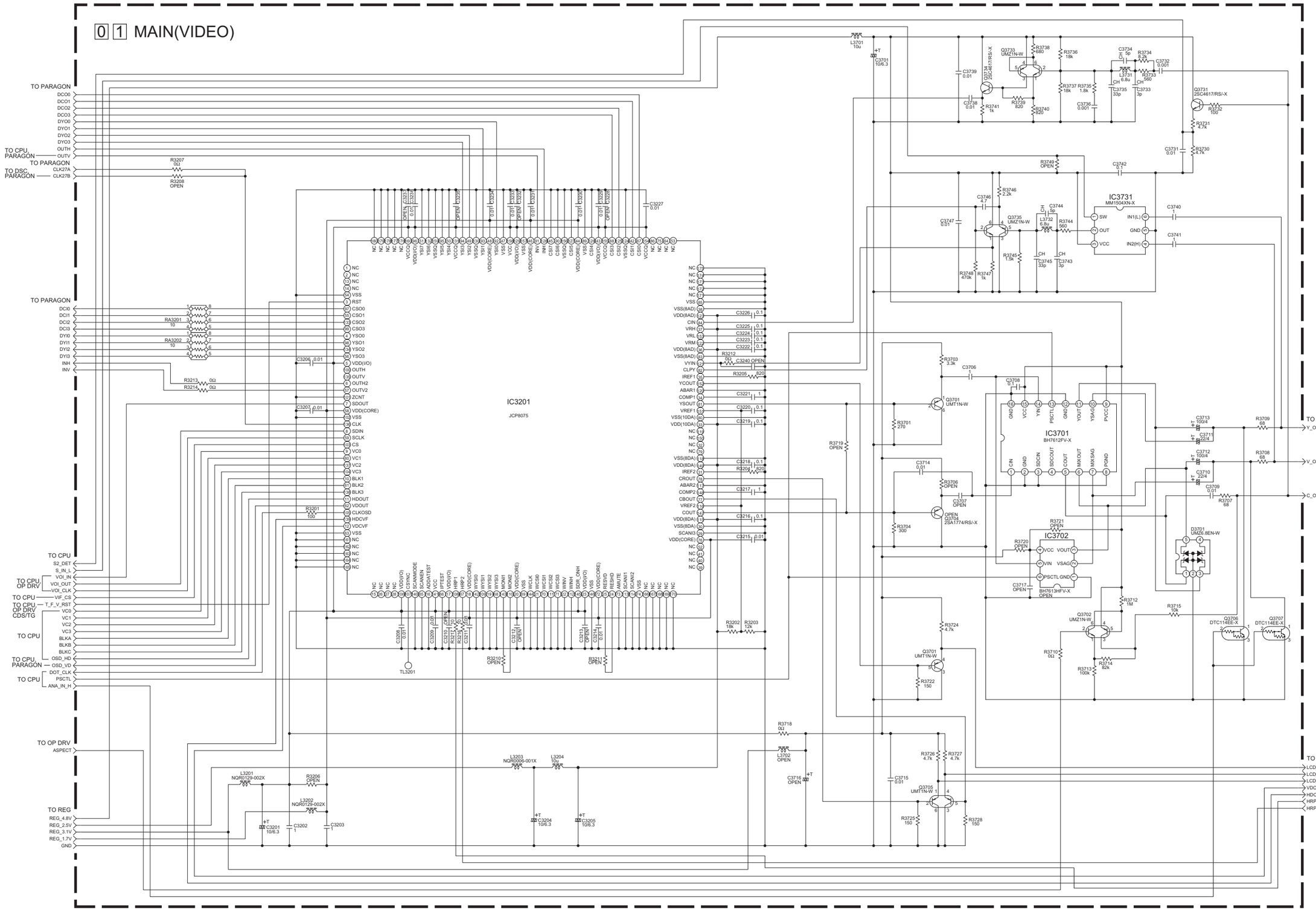
■ MAIN(PARAGON) SCHEMATIC DIAGRAM



y10500001a_rev0.1

NOTES: 1. For the destination of each signal and further line connections that are cut off from this diagram, refer to "BOARD INTERCONNECTIONS".
2. The parts with marked (∗) is not used.

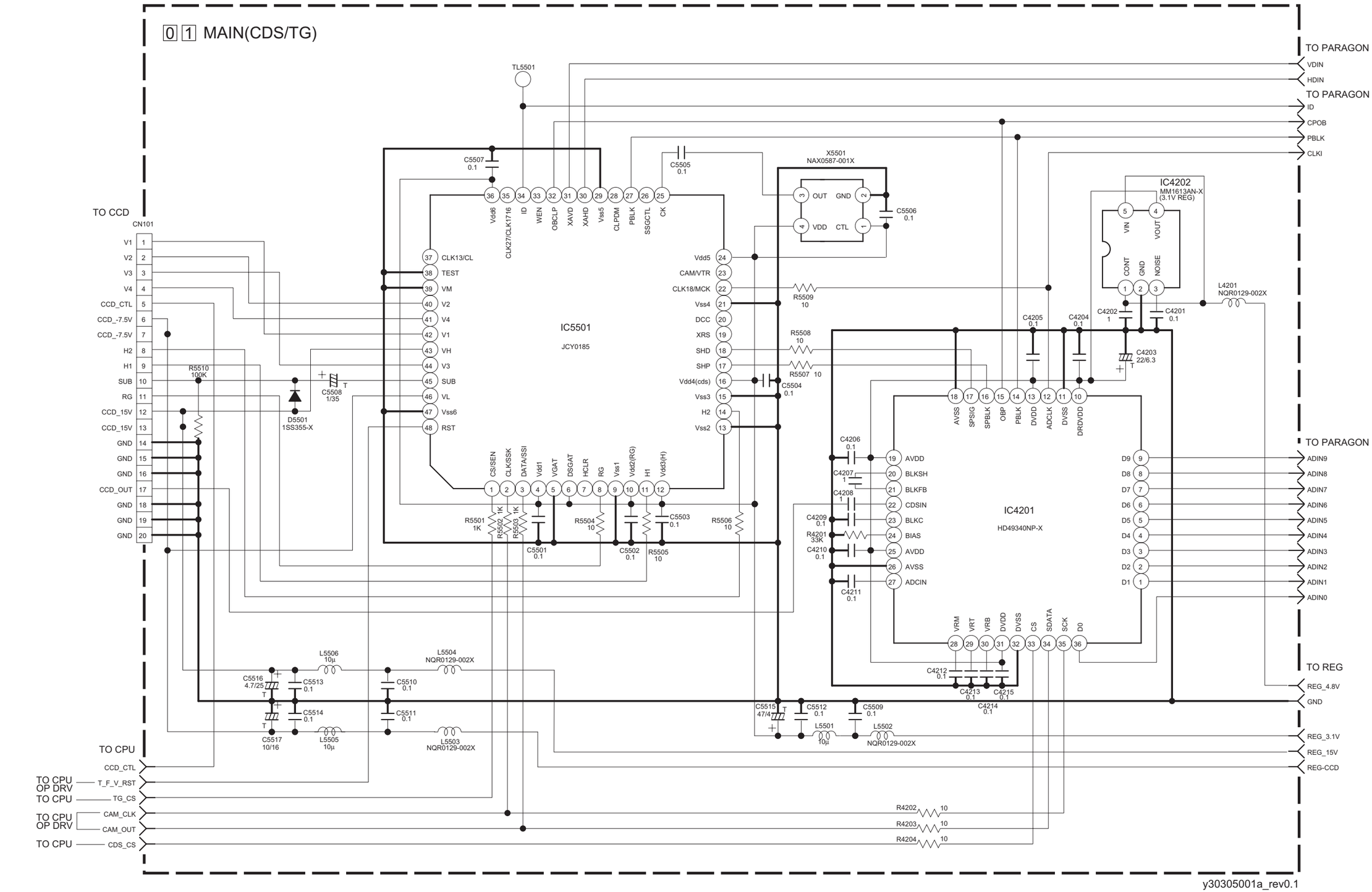
■ MAIN(VIDEO) SCHEMATIC DIAGRAM



NOTES: 1. For the destination of each signal and further line connections that are cut off from this diagram, refer to "BOARD INTERCONNECTIONS".
2. The parts with marked (∗) is not used.

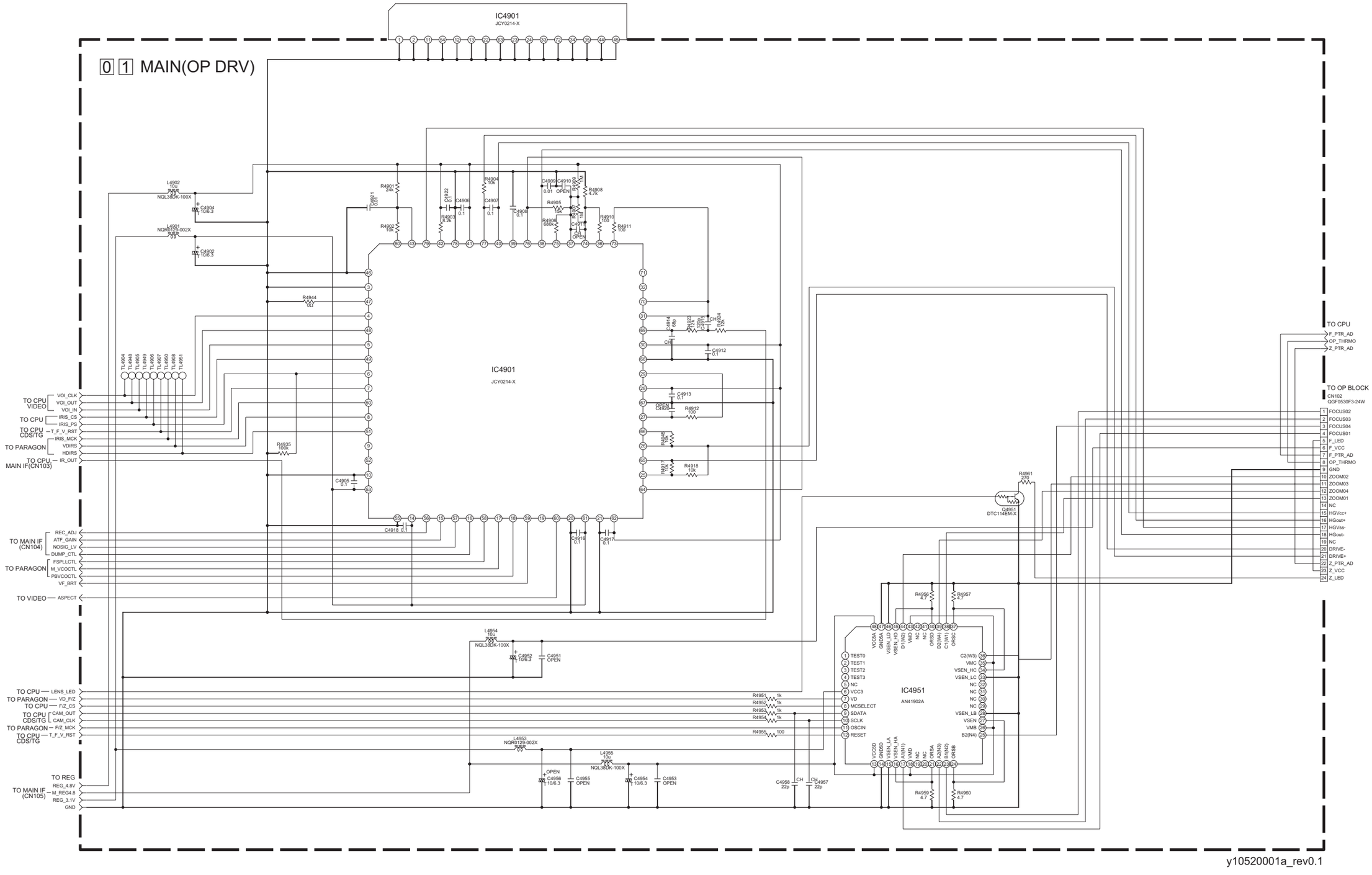
y10502001a_rev0.1

■ MAIN(CDS/TG) SCHEMATIC DIAGRAM



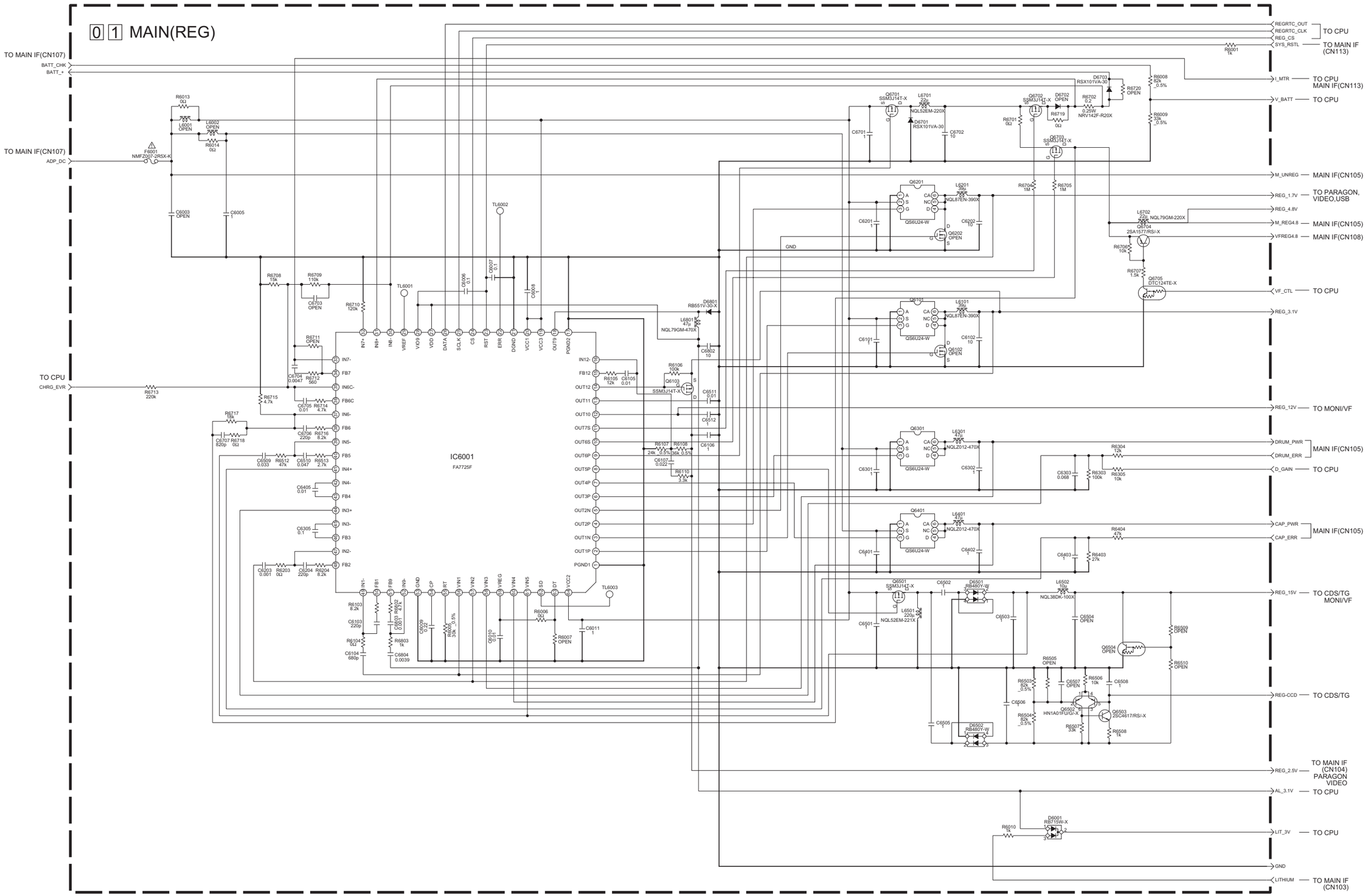
NOTES: 1. For the destination of each signal and further line connections that are cut off from this diagram, refer to "BOARD INTERCONNECTIONS".
2. The parts with marked (∗) is not used.

■ MAIN(OP DRV) SCHEMATIC DIAGRAM



NOTES: 1. For the destination of each signal and further line connections that are cut off from this diagram, refer to "BOARD INTERCONNECTIONS".
2. The parts with marked (∗) is not used.

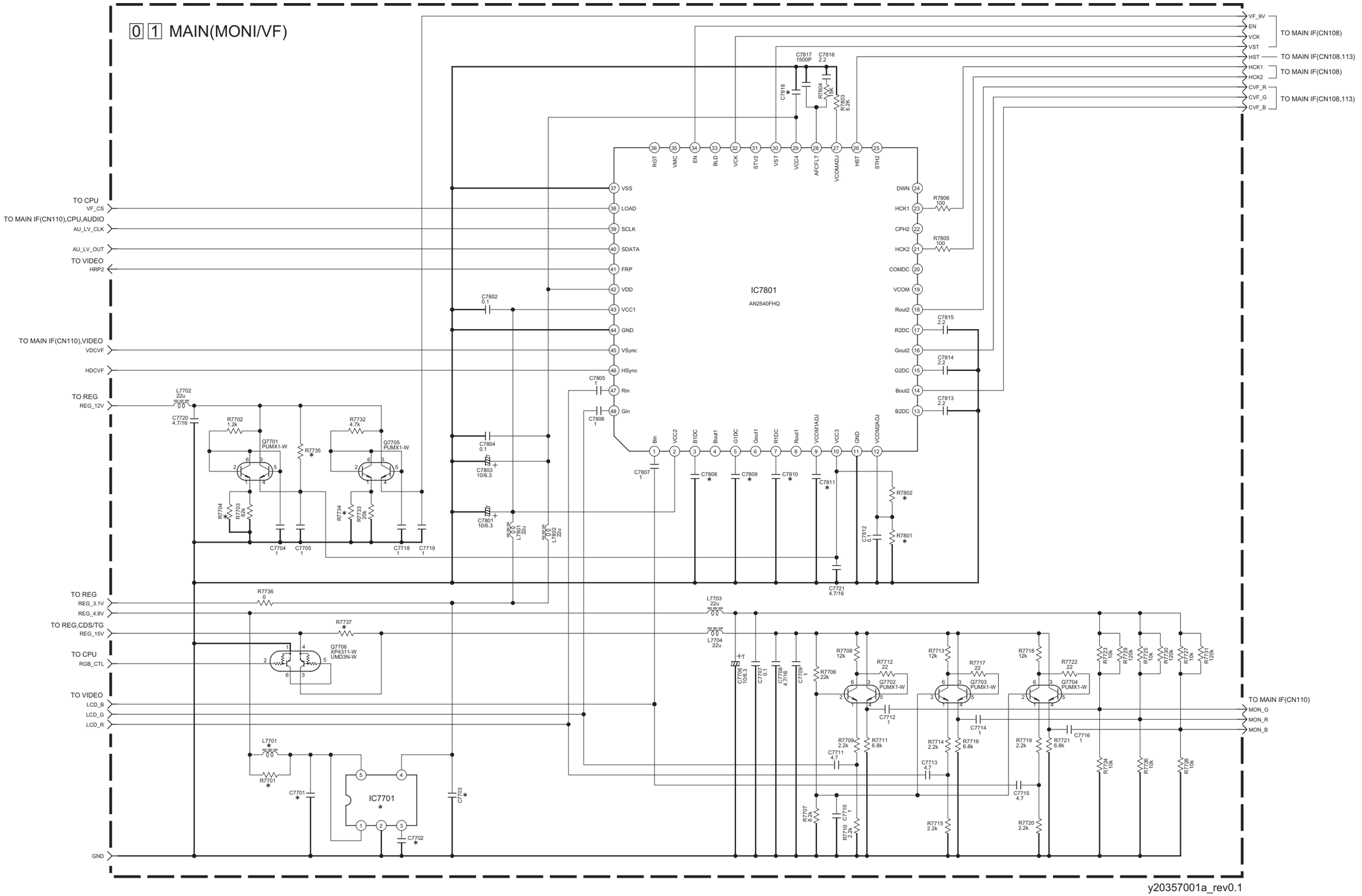
■ MAIN(REG) SCHEMATIC DIAGRAM



y10499001a_rev0.1

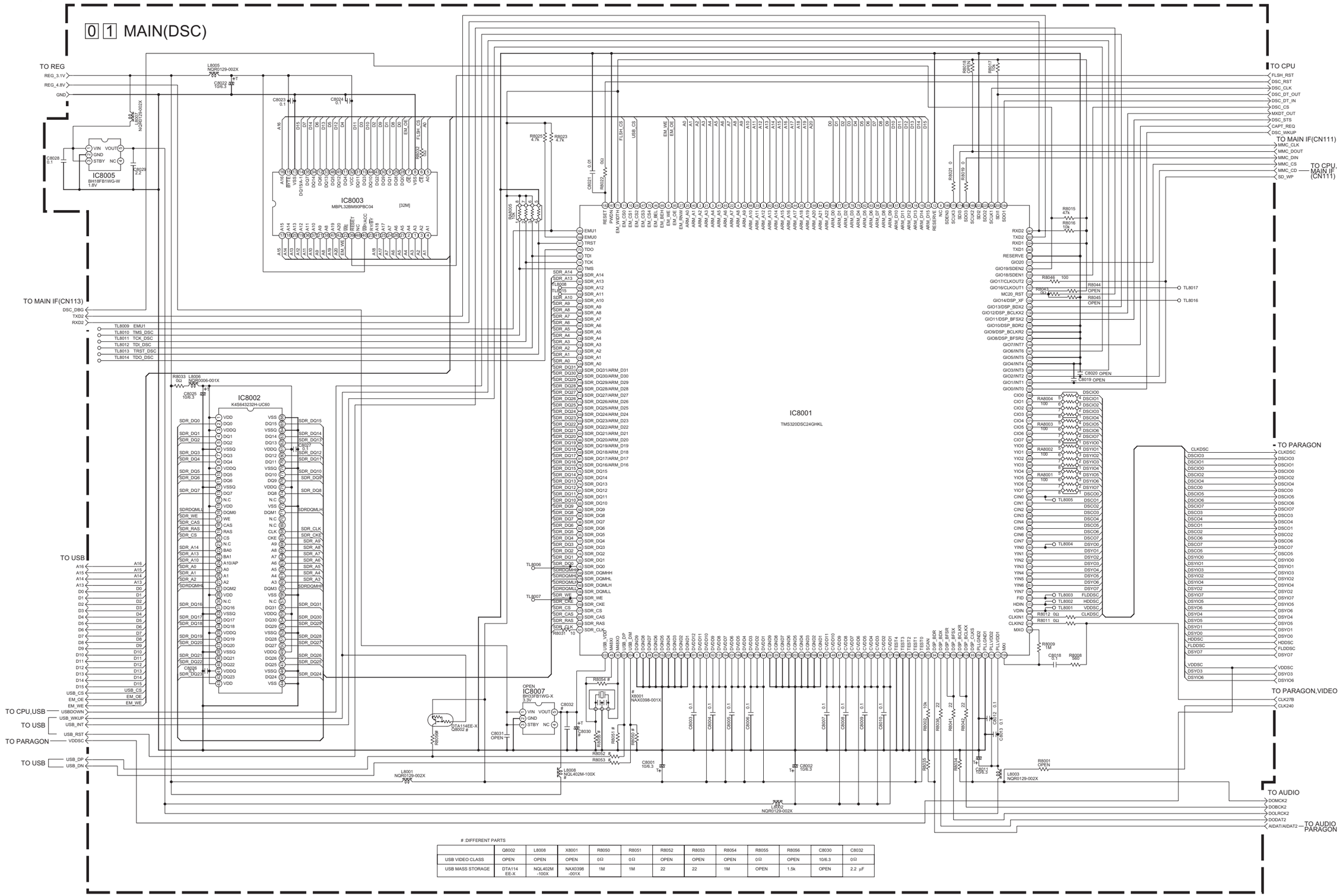
NOTES: 1. For the destination of each signal and further line connections that are cut off from this diagram, refer to "BOARD INTERCONNECTIONS".
2. The parts with marked (∗) is not used.

■ MAIN(MONI/VF) SCHEMATIC DIAGRAM



NOTES: 1. For the destination of each signal and further line connections that are cut off from this diagram, refer to "BOARD INTERCONNECTIONS".
2. The parts with marked (∗) is not used.

■ MAIN(DSC) SCHEMATIC DIAGRAM

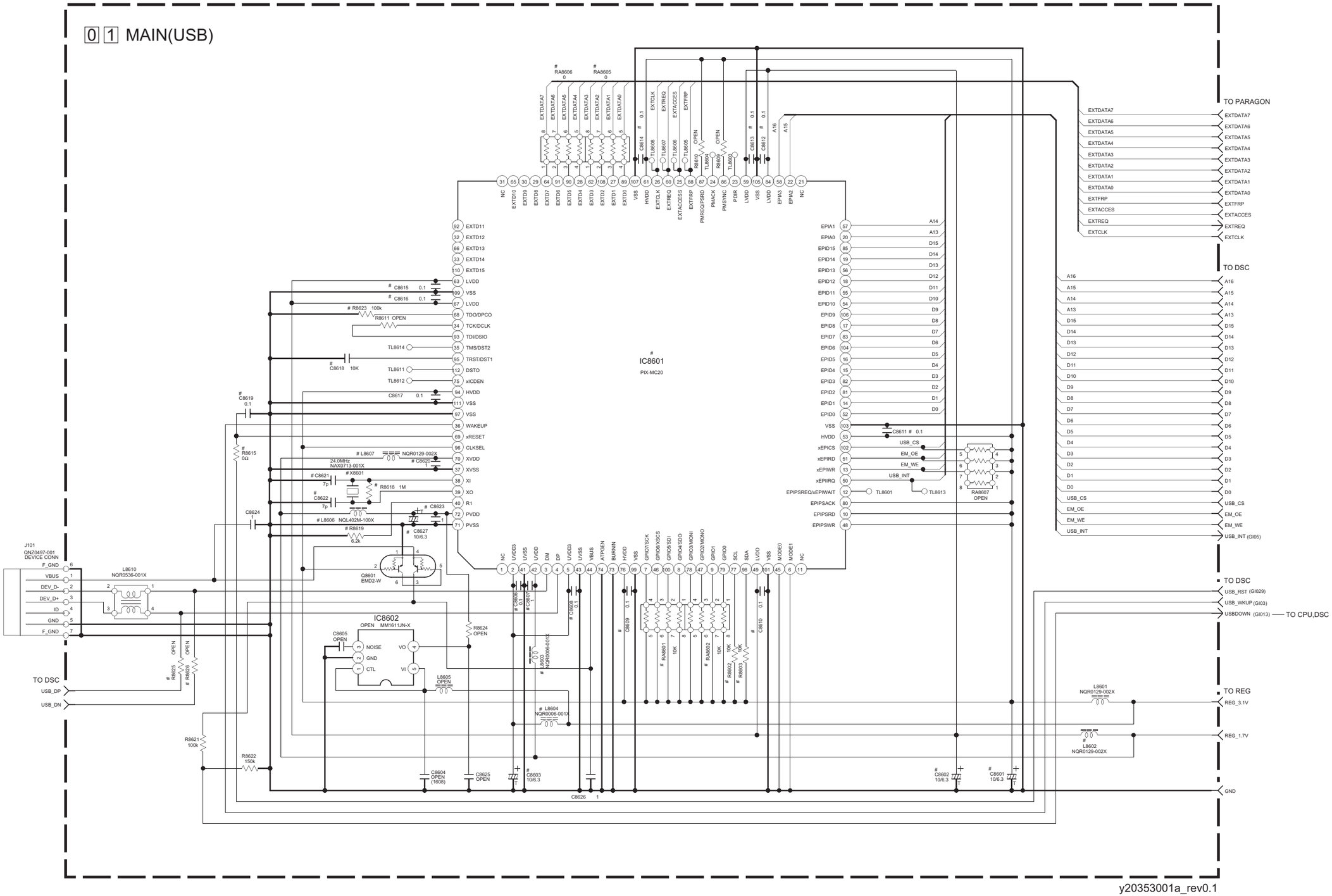


:DIFFERENT PARTS

	Q8002	L8008	X8001	R8050	R8051	R8052	R8053	R8054	R8055	R8056	C8030	C8032
USB VIDEO CLASS	OPEN	OPEN	OPEN	0Ω	0Ω	OPEN	OPEN	1M	OPEN	1.5k	OPEN	2.2 μF
USB MASS STORAGE	DTA114 EE-X	NQL402M -100X	NAX0398 -001X	1M	1M	22	22	1M	OPEN	1.5k	OPEN	2.2 μF

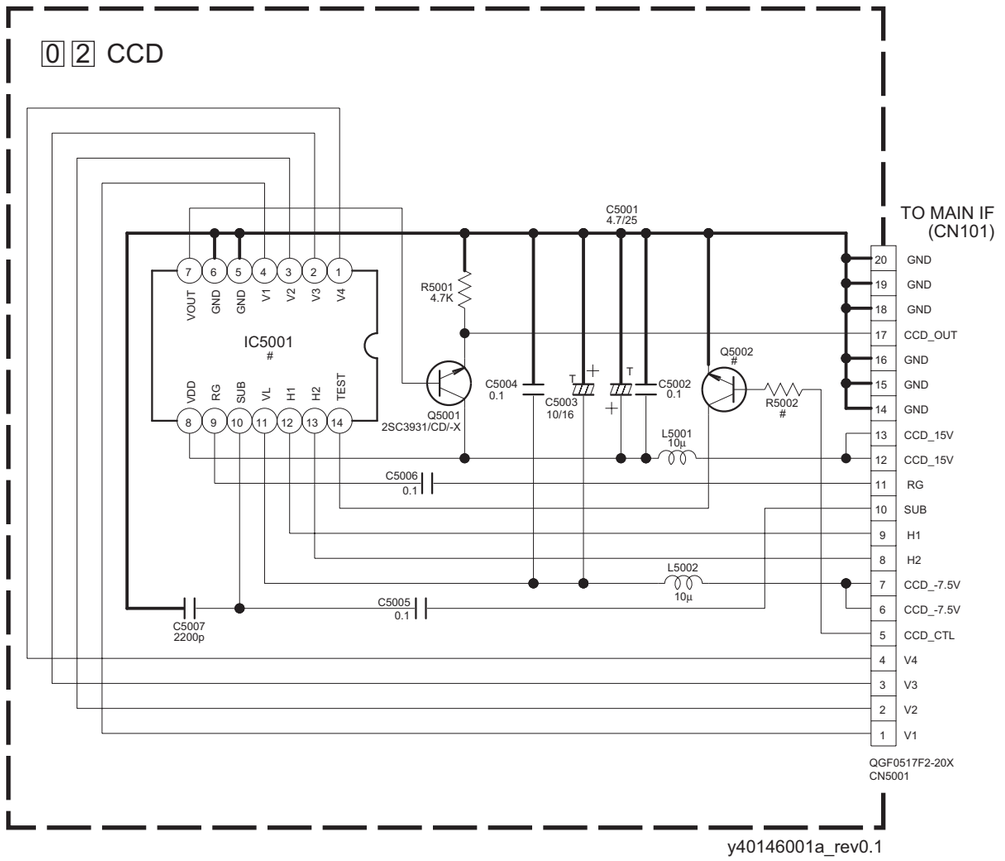
NOTES: 1. For the destination of each signal and further line connections that are cut off from this diagram, refer to "BOARD INTERCONNECTIONS".
2. The parts with marked (∗) is not used.

■ MAIN(USB) SCHEMATIC DIAGRAM



NOTES: 1. For the destination of each signal and further line connections that are cut off from this diagram, refer to "BOARD INTERCONNECTIONS".
2. The parts with marked (∗) is not used.

■ CCD SCHEMATIC DIAGRAM

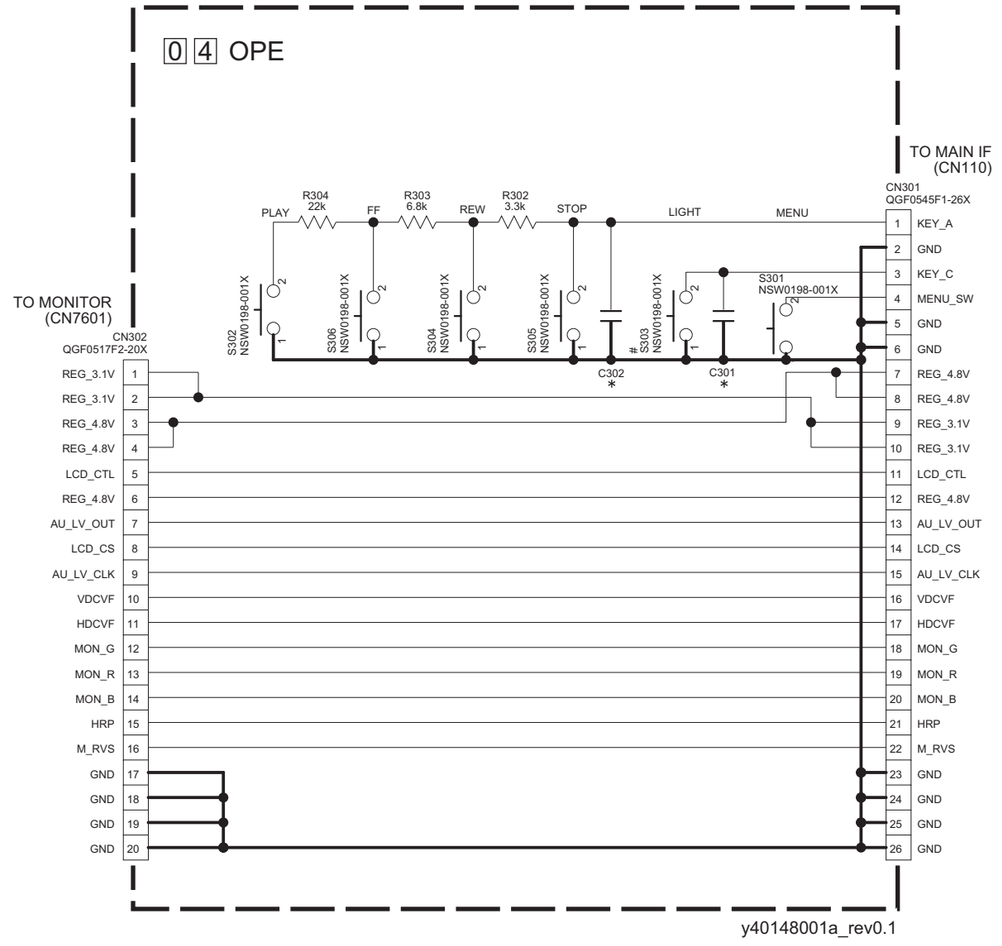


	IC5501
NTSC	ICX440UKM-V
PAL	ICX281HKM-V or ICX281HKM-K

DSC	Q5002	R5002
with DSC	2SC4081/QR/-X or BA847BW-X	4.7K
without DSC	*	*

NOTES :1. For the destination of each signal and further line connectionsthat are cut off from this diagram,
refer to "BOARD INTERCONNECTIONS".
2. The parts with marked (*) is not used.
3. IC5001 is incorporated in the CCD base assembly .
When IC5001 needs replacement, replace the CCD base assembly in whole because it cannot be replaced alone.

■ OPE SCHEMATIC DIAGRAM

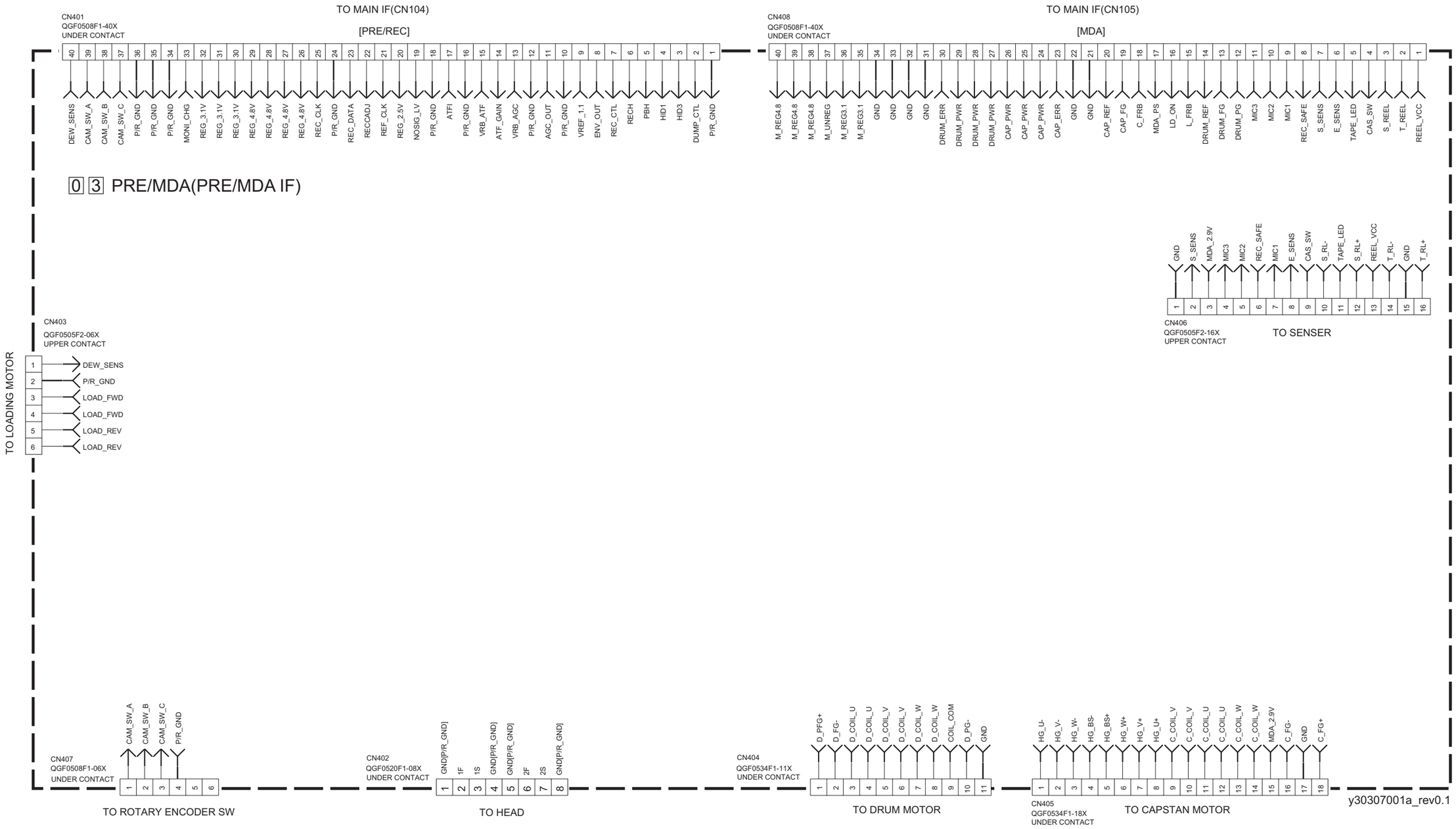


:EXCHANGE PARTS LIST

	DSC MODEL	NO DSC MODEL
S303	WEAR	NO WEAR

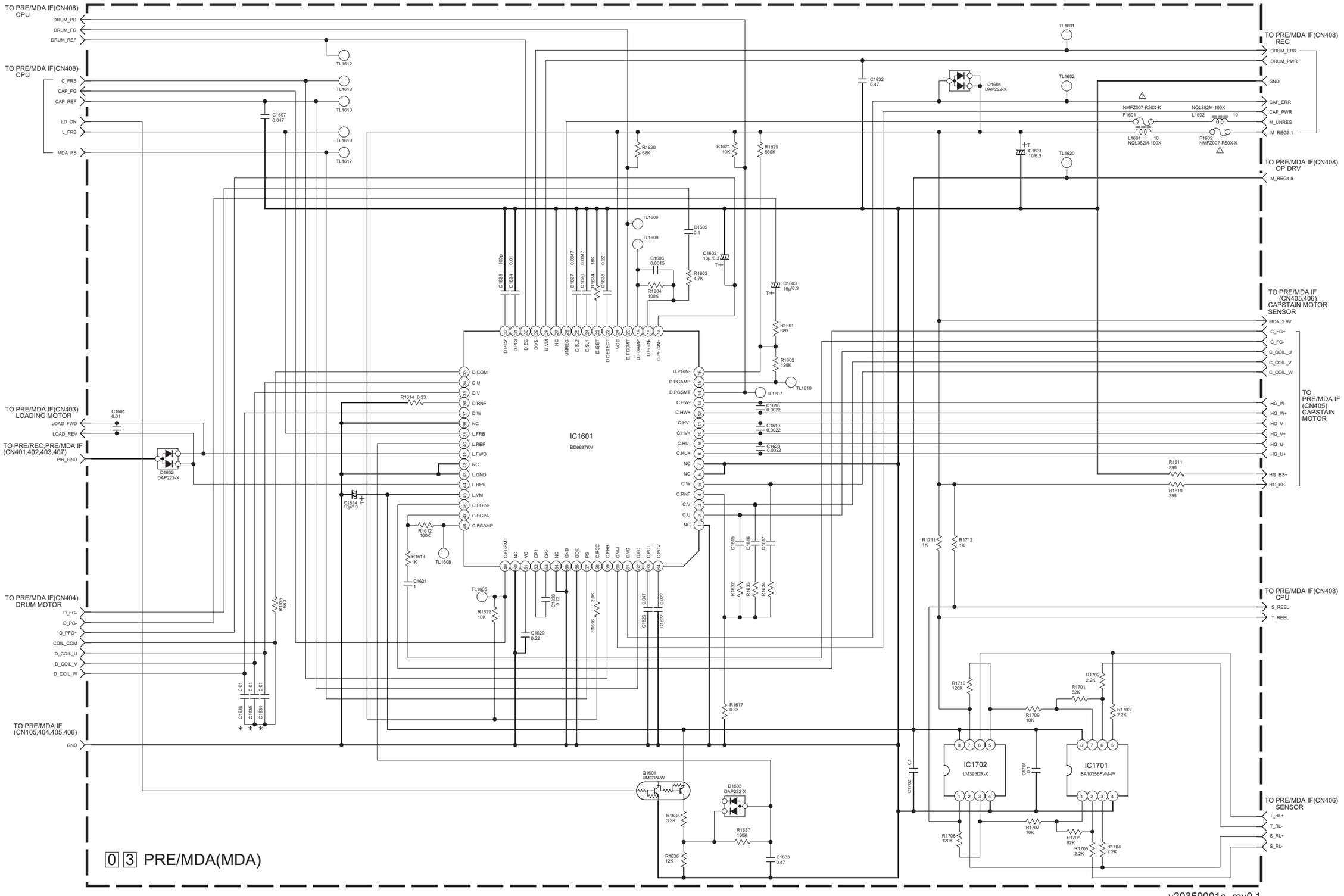
NOTES: 1. For the destination of each signal and further line connections that are cut off from this diagram, refer to "BOARD INTERCONNECTIONS".
2. The parts with marked (*) is not used.

■ PRE/MDA(PRE/MDA IF) SCHEMATIC DIAGRAM



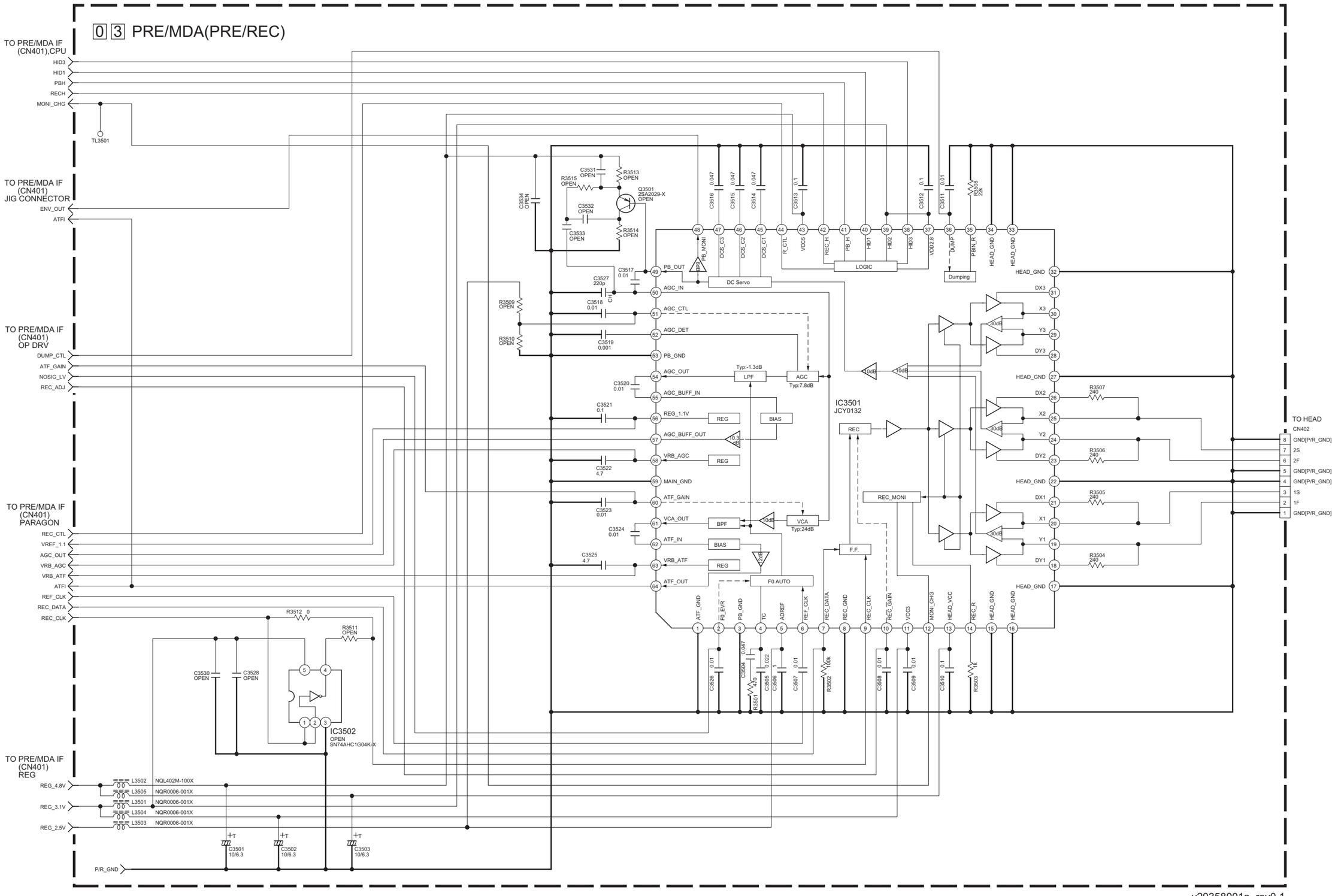
NOTES: 1. For the destination of each signal and further line connections that are cut off from this diagram, refer to "BOARD INTERCONNECTIONS".
2. The parts with marked (∗) is not used.

■ PRE/MDA(MDA) SCHEMATIC DIAGRAM



NOTES: 1. For the destination of each signal and further line connections that are cut off from this diagram, refer to "BOARD INTERCONNECTIONS".
2. The parts with marked (∗) is not used.

■ PRE/MDA(PRE/REC) SCHEMATIC DIAGRAM



NOTES: 1. For the destination of each signal and further line connections that are cut off from this diagram, refer to "BOARD INTERCONNECTIONS".
2. The parts with marked (∗) is not used.

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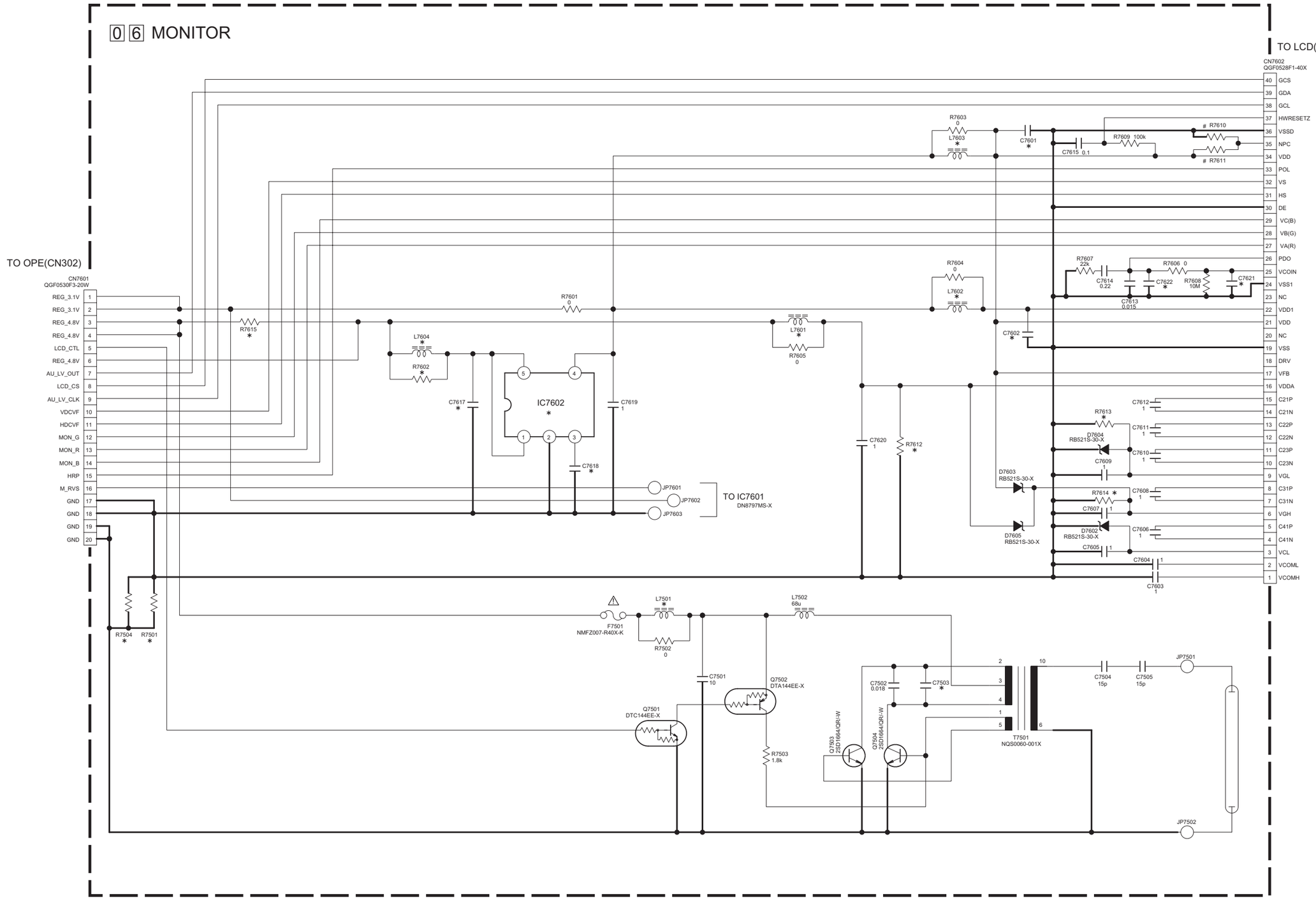
■ MONITOR SCHEMATIC DIAGRAM



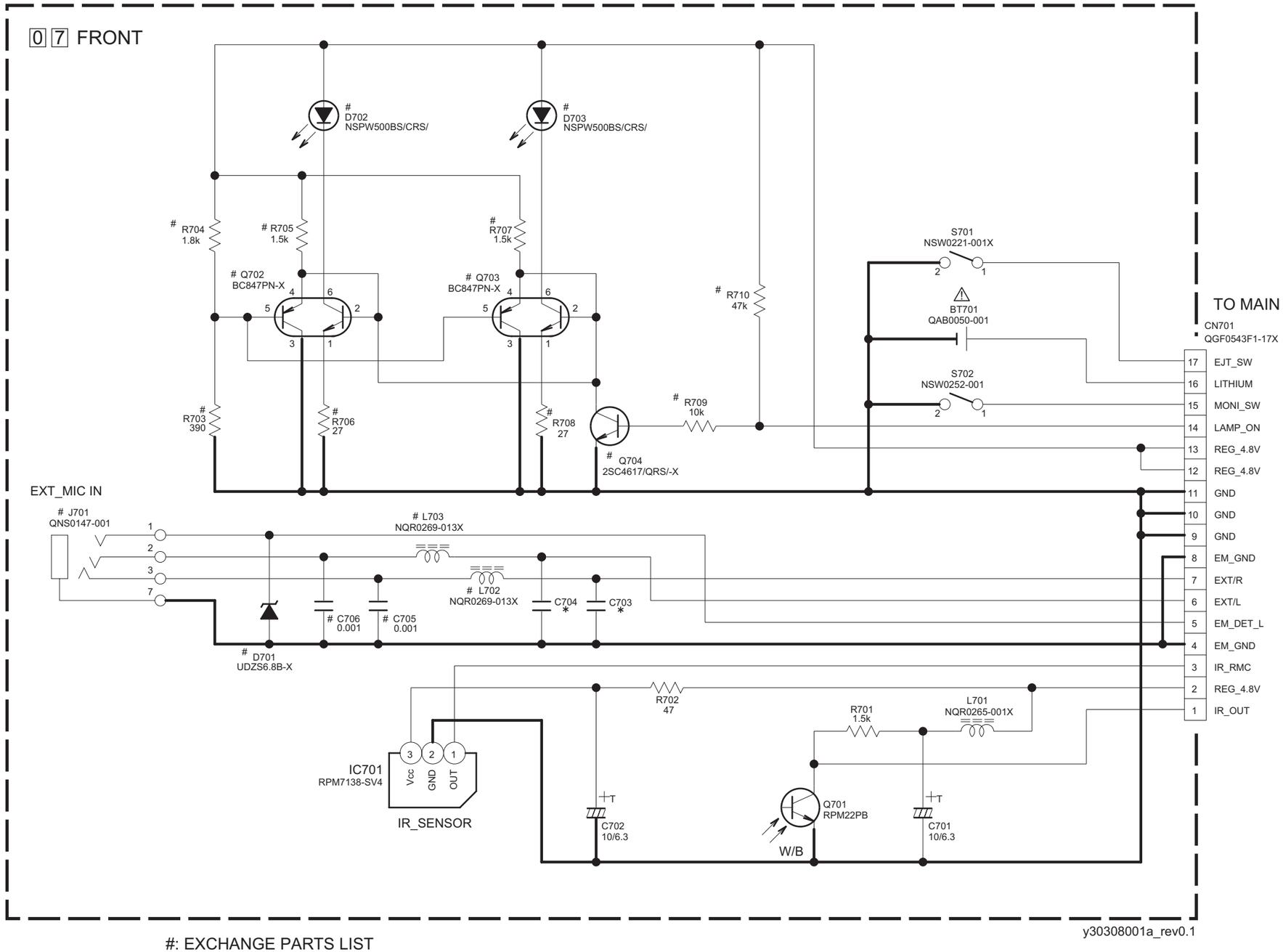
y20360001a_rev0.1

Exchange Parts List

	R7610	R7611
NTSC	*	0
PAL	0	*

NOTES: 1. For the destination of each signal and further line connections that are cut off from this diagram, refer to "BOARD INTERCONNECTIONS".
2. The parts with marked (*) is not used.

■ FRONT SCHEMATIC DIAGRAM



y30308001a_rev0.1

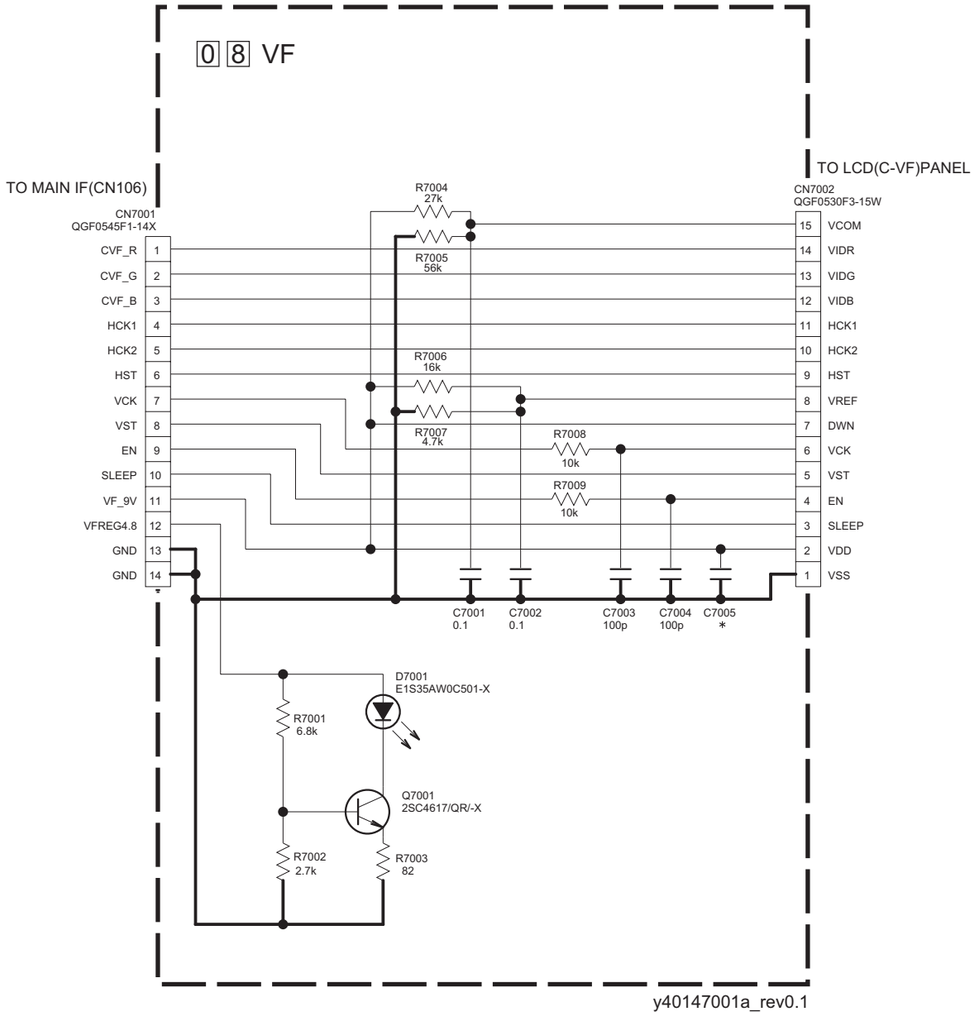
#: EXCHANGE PARTS LIST

	LED	NO LED
Q702 - Q704	WEAR	NO WEAR
D702 - D703	WEAR	NO WEAR
R703 - R710	WEAR	NO WEAR

	EXT.MIC	NO EXT.MIC
D701	WEAR	NO WEAR
C705 - C706	WEAR	NO WEAR
L702 - L703	WEAR	NO WEAR
J701	WEAR	NO WEAR

NOTES: 1. For the destination of each signal and further line connections that are cut off from this diagram, refer to "BOARD INTERCONNECTIONS".
2. The parts with marked (∗) is not used.

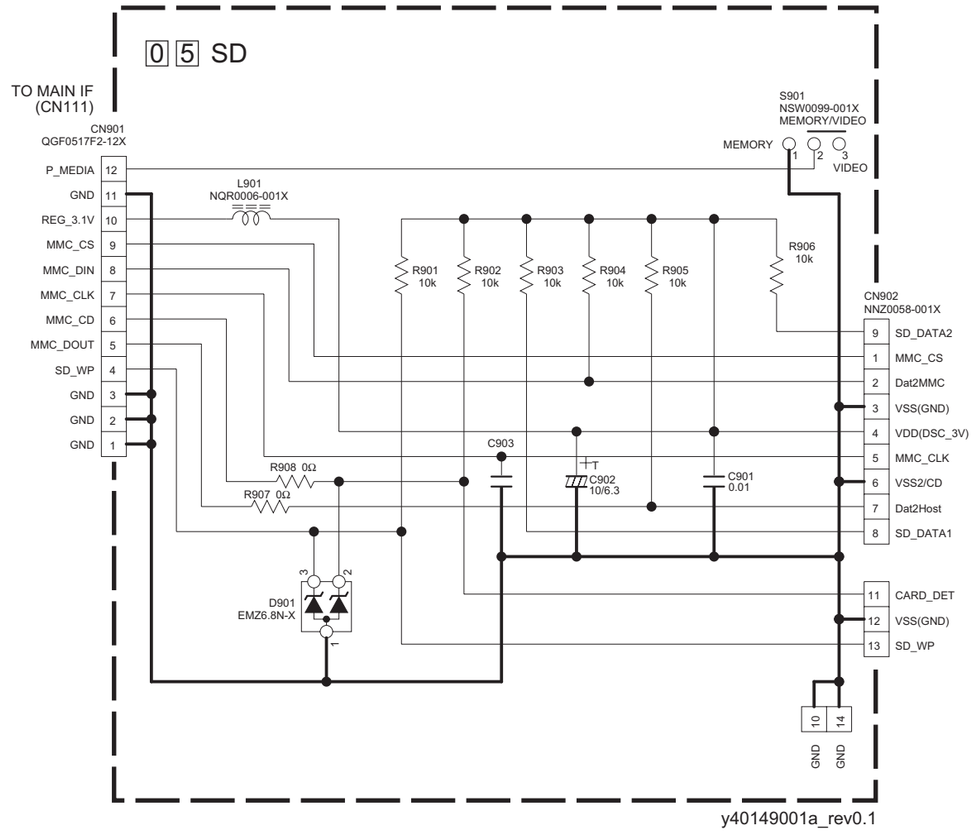
■ VF SCHEMATIC DIAGRAM



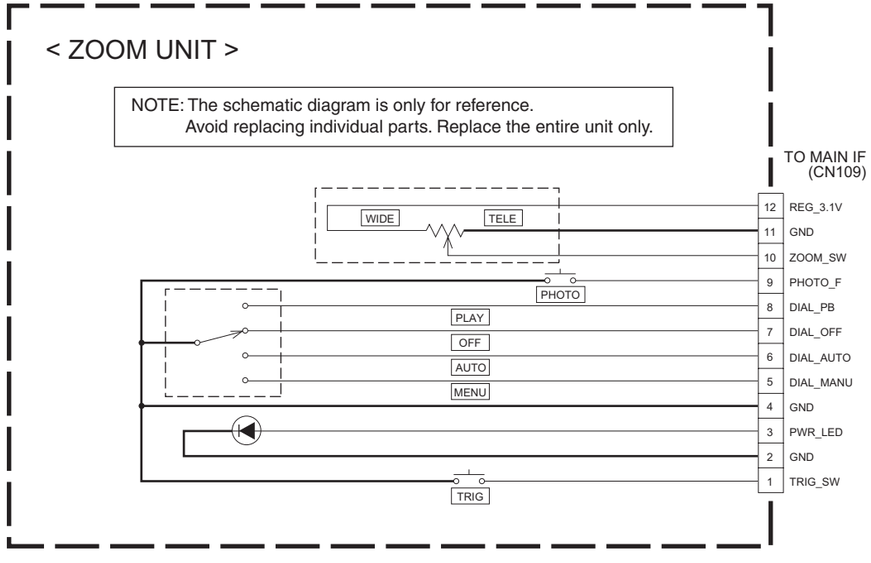
y40147001a_rev0.1

NOTES: 1. For the destination of each signal and further line connections that are cut off from this diagram, refer to "BOARD INTERCONNECTIONS".
2. The parts with marked (∗) is not used.

■ SD AND ZOOM UNIT SCHEMATIC DIAGRAM



y40149001a_rev0.1

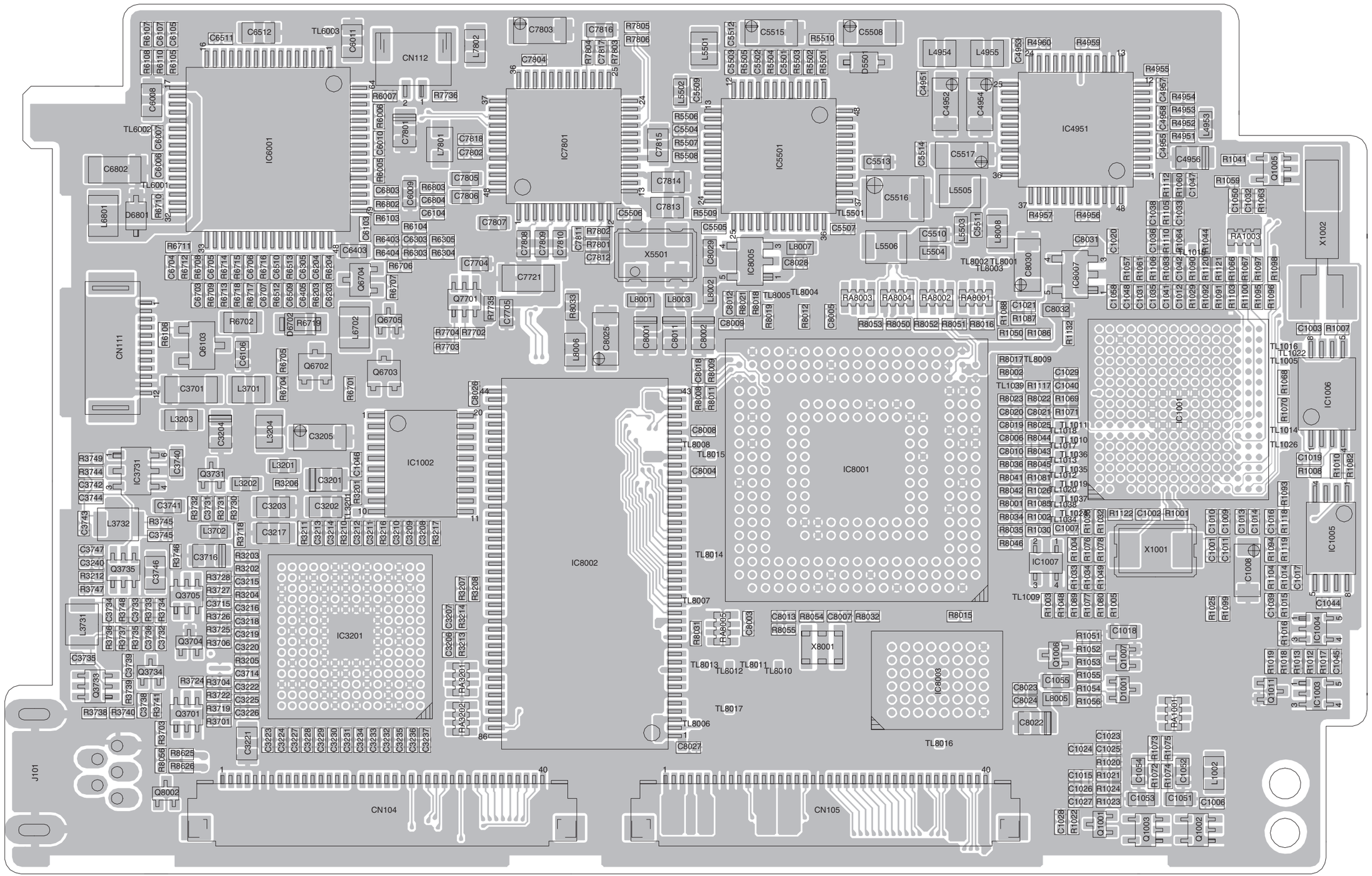


NOTES: 1. For the destination of each signal and further line connections that are cut off from this diagram, refer to "BOARD INTERCONNECTIONS".
2. The parts with marked (∗) is not used.

■ MAIN CIRCUIT BOARD

<01>MAIN
LYB10025-001B

FOIL SIDE(B)

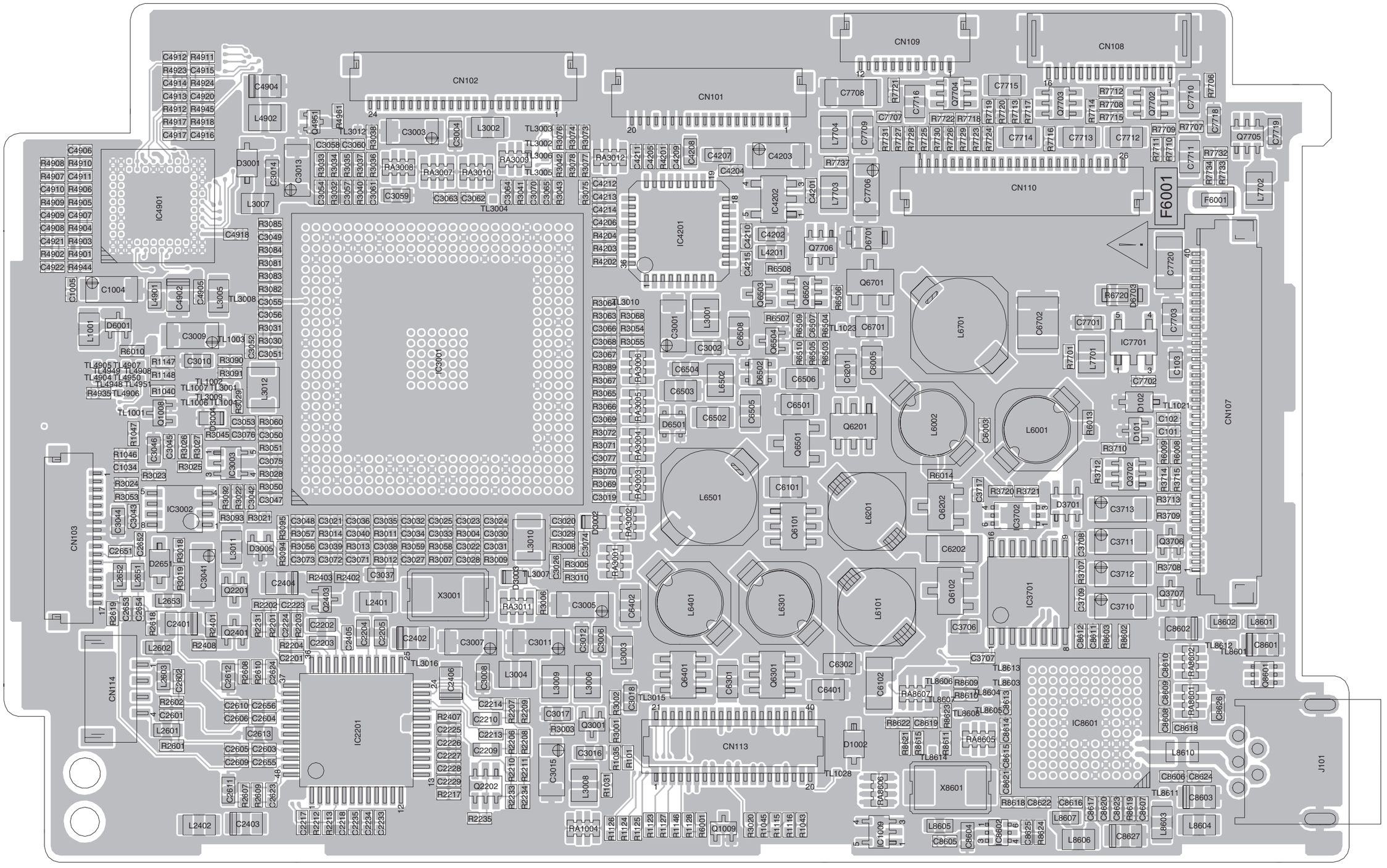


■ MAIN CIRCUIT BOARD

<01>MAIN
LYB10025-001B

CAUTION :
FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH SAME TYPE AND RATED FUSE(S).
ATTENTION :
POUR UNE PROTECTION PERMANENTE CONTRE LES RISQUE D'INCENDE,
REMPLACER LES FUSIBLES PAR UNAAUTRE DE MEME TYPE ET DE MEME TENSION.

COMPONENT SIDE(A)

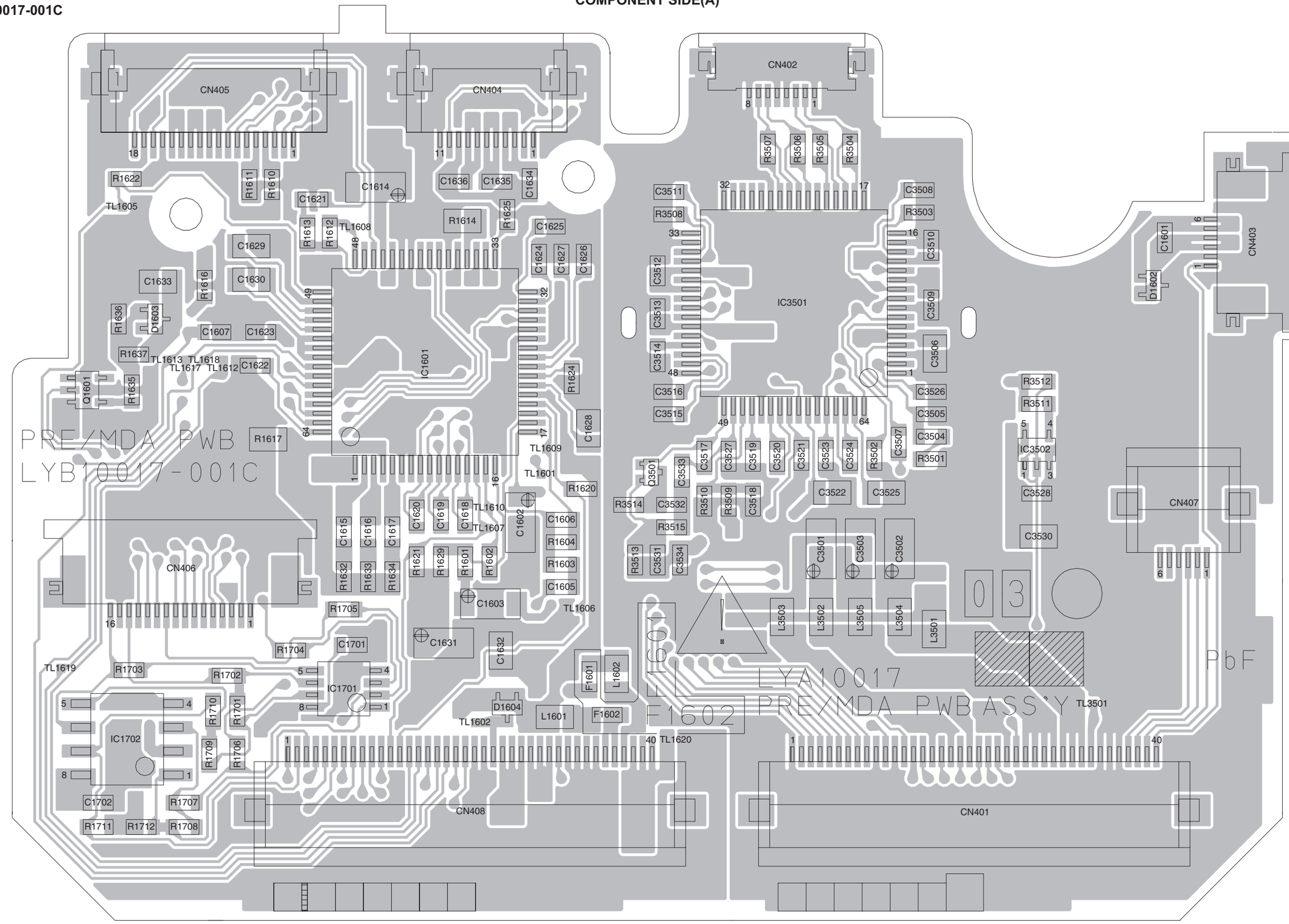


■ PRE/MDA CIRCUIT BOARD

<03>PRE/MDA
LYB10017-001C

CAUTION :
FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH SAME TYPE AND RATED FUSE(S).
ATTENTION :
POUR UNE PROTECTION PERMANENTE CONTRE LES RISQUE D'INCENDE,
REMPLACER LES FUSIBLES PAR UNAAUTRE DE MEME TYPE ET DE MEME TENSION.

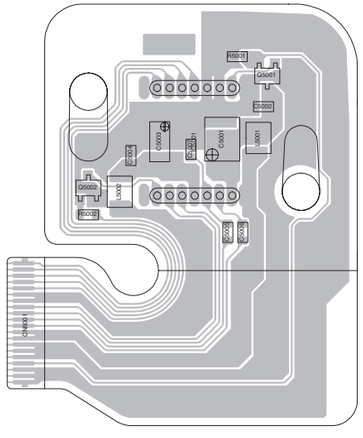
COMPONENT SIDE(A)



■ CCD, OPE, MONITOR, FRONT, VF, SD CIRCUIT BOARDS

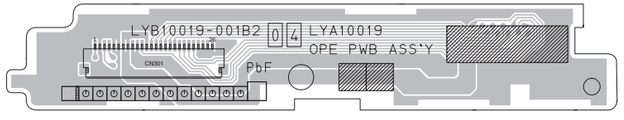
<02>CCD
LYB20013-001B

COMPONENT SIDE(A)

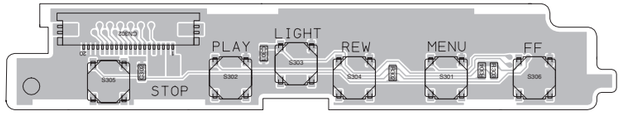


<04>OPE
LYB10019-001B

FOIL SIDE(B)

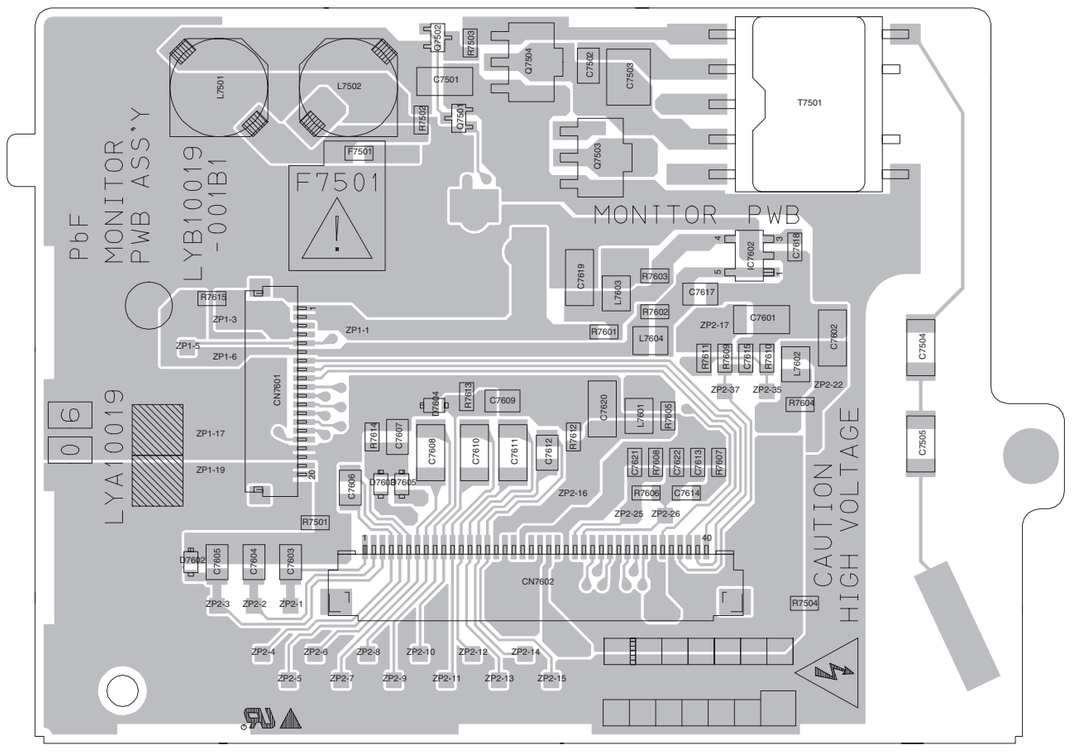


COMPONENT SIDE(A)



<06>MONITOR
LYB10019-001B

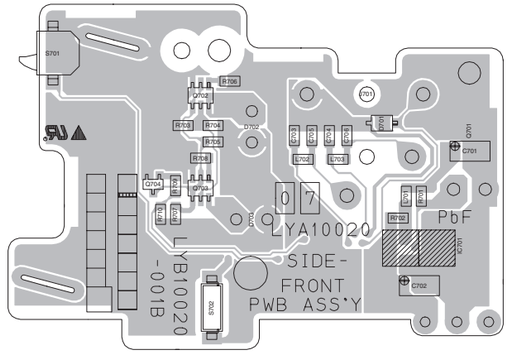
COMPONENT SIDE(A)



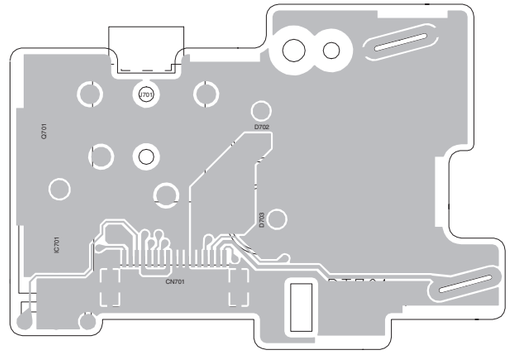
CAUTION :
FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH SAME TYPE AND RATED FUSE(S).
ATTENTION :
POUR UNE PROTECTION PERMANENTE CONTRE LES RISQUE D'INCENDE,
REMPLACER LES FUSIBLES PAR UNAAUTRE DE MEME TYPE ET DE MEME TENSION.

<07>FRONT
LYB10020-001B

FOIL SIDE(B)

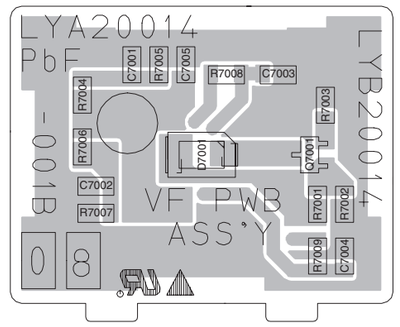


COMPONENT SIDE(A)

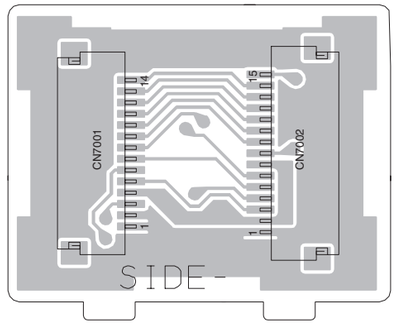


<08>VF
LYB20014-001B

FOIL SIDE(B)

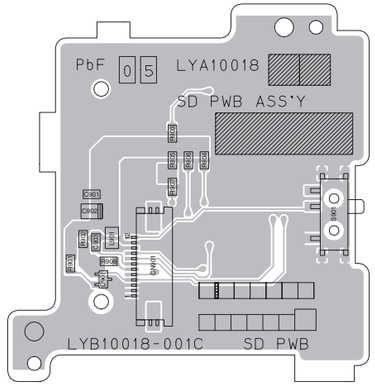


COMPONENT SIDE(A)

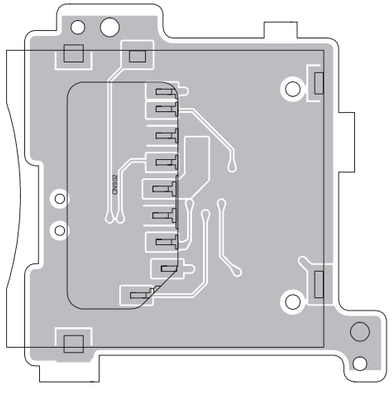


<05>SD
LYB10018-001C

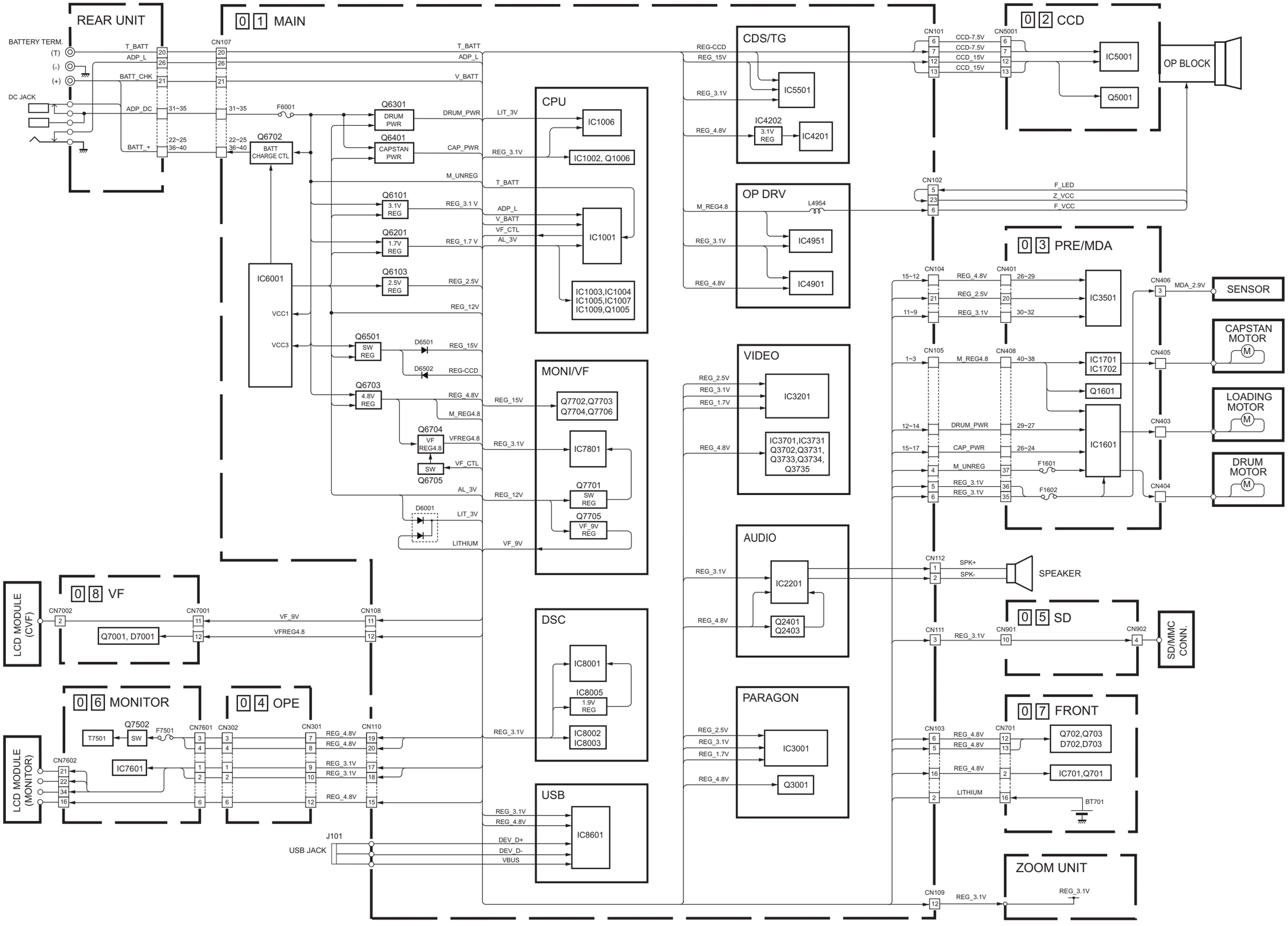
FOIL SIDE(B)



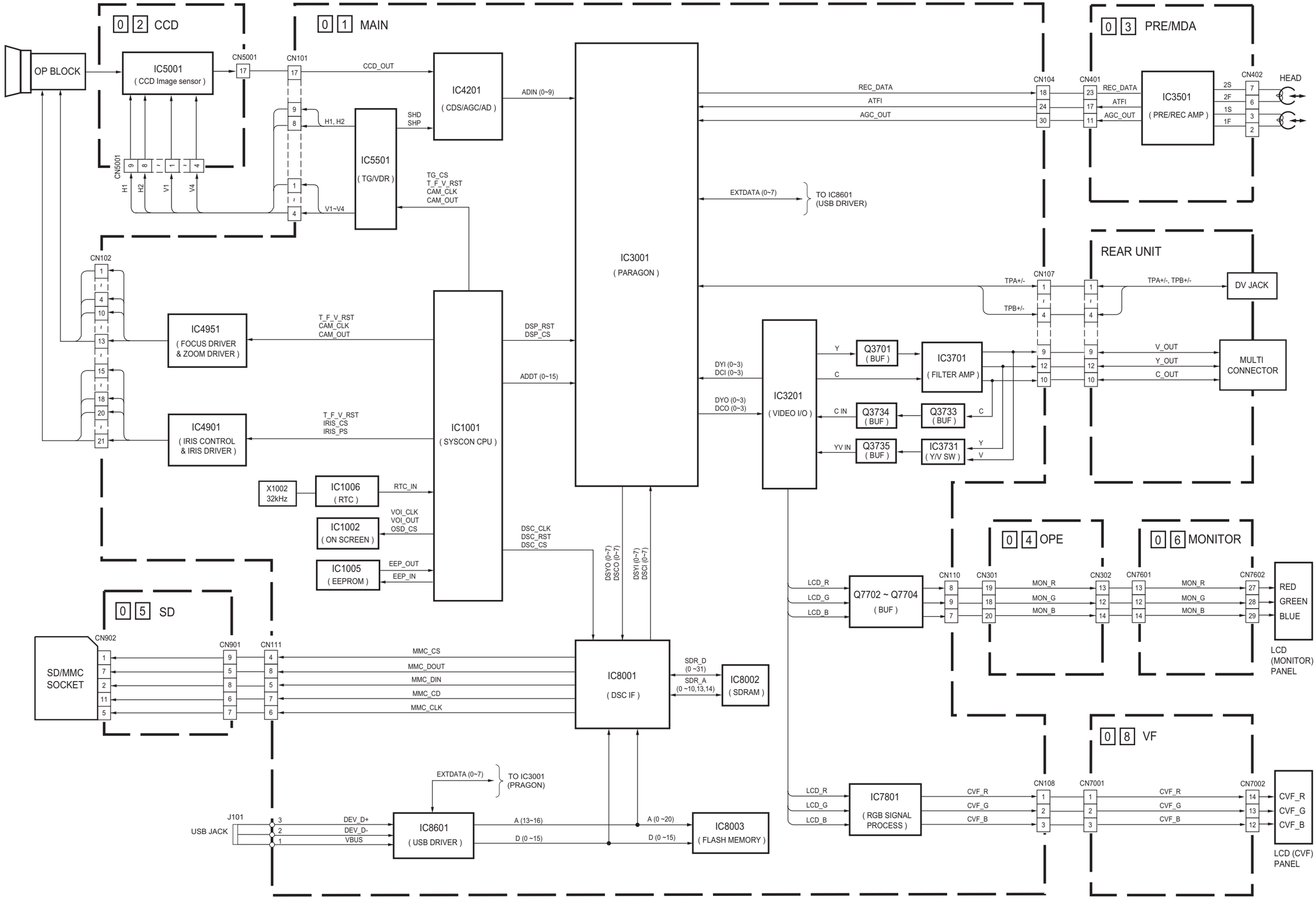
COMPONENT SIDE(A)



■ POWER SYSTEM BLOCK DIAGRAM



■ VIDEO SYSTEM BLOCK DIAGRAM



■ VOLTAGE CHARTS

<MAIN>

MODE PIN NO.	REC	PLAY
IC1001	-	-
IC1002		
1	2.8	2.8
2	2.6	2.5
3	0.2	0.2
4	3.0	3.0
5	3.0	3.0
6	3.0	3.1
7	0	0
8	1.5	1.4
9	0	0
10	0	0
11	0	0
12	0	0
13	0	0
14	0	0
15	0	0
16	0	0
17	2.5	2.6
18	0	0
19	2.7	2.9
20	2.8	2.8
IC1003		
1	0	0
2	3.0	3.0
3	0	0
4	3.0	3.1
5	3.0	3.0
IC1004		
1	1.4	1.4
2	0	0
3	1.2	1.2
4	0	0
5	3.0	3.0
IC1005		
1	3.0	3.0
2	0.1	0.1
3	3.0	3.0
4	0	0
5	3.0	3.0
6	3.0	3.0
7	3.0	3.0
8	3.0	3.0
IC1006		
1	0	0
2	3.0	3.0
3	3.0	3.0
4	0	0
5	3.0	3.0
6	0.4	0.5
7	0.1	0.3
8	3.0	3.0
IC1007		
1	3.0	3.0
2	3.0	3.0
3	0	0
4	0	0
IC1009		
1	2.9	3.0
2	3.0	3.0
3	0	0
4	3.0	3.0
5	3.0	3.0
IC2201		
1	0	1.5
2	0	0
3	0	1.5
4	3.0	3.0
5	3.0	3.0
6	0	0
7	1.5	1.5
8	1.3	1.3
9	1.5	1.5
10	0.4	0.2
11	0	2.7
12	2.9	2.9
13	1.5	0
14	1.4	0
15	0	0.1
16	0	0.1
17	0	0
18	0	0
19	3.1	3.0
20	0	0
21	0.1	0.2
22	1.5	1.5
23	0.2	0.2
24	1.5	1.5
25	0	0
26	0	0
27	4.8	4.7
28	0	0
29	2.4	2.0
30	0	0
31	3.0	3.1
32	1.5	1.5
33	0.1	1.5
34	0.2	1.4
35	0.1	1.5
36	1.5	1.5
37	1.5	1.5
38	1.4	1.5
39	1.5	0.4
40	1.3	0
41	0	0
42	4.0	4.4
43	0	0
44	4.0	4.3
45	1.5	0
46	1.5	0
47	1.5	1.5
48	1.5	0
IC3001	-	-
IC3201		
1	2.8	2.7
2	3.0	3.0
3	2.8	2.8
4	2.9	2.9
5	0	0
6	1.6	1.7
7	0	0
8	0	0
9	0	0
10	0	0
11	0.2	0.2
12	2.8	2.8
13	2.9	2.9
14	3.0	3.0
15	0	0
16	3.0	3.0
17	1.5	1.5
18	0	0
19	2.5	0
20	0	0
21	0	0
22	0	0
23	0	0
24	0	0
25	2.8	2.7
26	0	0
27	3.0	3.0
28	1.4	1.4
29	0	0
30	3.0	3.0
31	1.1	1.0
32	0	0.4
33	0	0
34	1.7	1.7
35	0.3	0.3
36	1.1	1.1
37	0.5	0.5
38	3.0	3.0
39	0	0
40	1.1	1.0
41	0.3	0.4
42	0	0
43	1.7	1.7
44	0.5	0.5
45	1.1	1.0
46	0	0
47	3.0	3.0
48	0	0
49	0	0
50	1.5	1.5
51	1.5	1.5
52	1.4	1.4
53	1.0	1.1
54	1.1	1.2
55	0	1.5
56	0	0
57	1.7	1.7
58	0	0
59	1.4	1.1
60	1.2	1.5
61	1.2	0
62	1.3	1.3
63	2.8	2.8
64	1.5	1.5
IC3701	-	-
IC3731	-	-
IC4201		
1	0.9	0
2	0.6	0
3	0.2	0
4	0	0
5	0	3.0
6	0	0
7	0	0
8	0	0
9	1.0	0
10	2.9	2.9
11	0	0
12	1.3	1.0
13	3.0	3.0
14	2.4	0
15	2.9	0
16	2.2	0
17	2.2	0
18	0	0
19	3.0	3.0
20	1.9	0
21	1.9	0
22	1.9	1.6
23	1.9	0
24	1.2	0
25	3.0	3.0
26	0	0
27	0	0.1
28	1.4	0
29	1.9	0
30	0.9	0
31	3.0	3.0
32	0	0
33	3.0	3.0
34	0	0
35	3.0	3.0
36	1.2	0
IC4202		
1	4.7	4.8
2	0	0
3	1.2	1.2
4	2.9	3.0
5	4.8	4.8
IC4901	-	-
IC4951		
1	0.6	0.6
2	0.1	0.1
3	1.5	1.5
4	1.5	1.4
5	0	0
6	3.0	3.1
7	0	0
8	2.9	2.9
9	0	0
10	3.0	2.9
11	1.5	1.4
12	3.0	2.9
13	4.8	4.8
14	0	0
15	0	0
16	0	0
17	0.1	0
18	4.8	4.8
19	0	0
20	0	0
21	0	0
22	0.1	0
23	0.1	0
24	0	0
25	0	0
26	4.8	4.8
27	0	0
28	0	0
29	0	0
30	0	0
31	0	0
32	0	0
33	0	0
34	0	0
35	4.8	4.8
36	0	0
37	0	0
38	0	0
39	0	0
40	0	0
41	0	0
42	0	0
43	4.7	4.8
44	0	0
45	0	0
46	0	0
47	0	0
48	4.8	4.8
IC5501		
1	0	0
2	3.0	3.0
3	0	0
4	3.0	3.0
5	0	0
6	3.0	3.0
7	0.3	0
8	0.2	0
9	0	0
10	3.0	3.0
11	1.6	0
12	3.0	3.1
13	0	0
14	1.2	0
15	0	0
16	3.0	3.0
17	0	0
18	0	0
19	2.3	0
20	0	0
21	0	0
22	1.3	0.1
23	0	0
24	3.0	3.0
25	0	-1.7
26	3.0	0
27	2.5	0
28	2.9	0
29	0	0
30	0.2	0.2
31	0.1	0
32	2.9	0
33	3.0	3.0
34	1.5	0
35	0	0
36	3.0	3.0
37	0	0
38	0	0
39	0	0
40	-0.2	0
41	-7.3	0
42	-0.2	14.9
43	14.8	14.9
44	-7.3	14.9
45	-7.3	14.9
46	-7.8	-7.7
47	0	0
48	0	3.0
IC6001		
1	0	0
2	7.6	7.6
3	0	0
4	8.9	8.9
5	0	0
6	8.0	8.0
7	9.5	9.5
8	7.6	7.6
9	6.1	6.1
10	0	0
11	10.6	10.6
12	11.7	11.7
13	8.3	8.3
14	1.2	1.1
15	0.7	0.7
16	1.0	1.0
17	0	0
18	3.1	3.0
19	10.8	10.8
20	10.8	10.8
21	0	0
22	0	0
23	3.0	3.0
24	3.0	3.0
25	3.0	3.0
26	3.0	3.0
27	3.0	3.0
28	3.0	3.1
29	1.0	1.0
30	0	0
31	0	0
32	0	0
33	0	0
34	2.7	2.7
35	0	0
36	0	0
37	0.9	0.9
38	0.9	0.9
39	1.0	1.0
40	0.8	0.8
41	0	0
42	0	0
43	0.7	0.5
44	0.3	0.3
45	0.3	0.3
46	0.8	0.8
47	1.0	1.0
48	0.7	0.7
49	1.0	1.0
50	0.5	0.5
51	0.8	0.8
52	1.0	1.0
53	0	0
54	0	0
55	0.9	0.9
56	3.1	3.0
57	1.7	1.7
58	2.9	3.0
59	2.7	2.7
60	1.2	1.1
61	14.9	14.9
62	10.6	10.6
63	2.7	2.7
64	10.8	10.8
IC7801		
1	2.4	2.4
2	3.0	3.1
3	2.1	1.9
4	2.0	2.0
5	2.1	0
6	2.0	0
7	2.1	3.0
8	0.5	3.1
9	0	1.0
10	9.6	10.9
11	0	0
12	4.9	5.4
13	1.5	0.7
14	1.5	0.7
15	1.5	0.7
16	1.5	0.7
17	1.5	0.7
18	1.5	0.7
19	5.0	5.5
20	0.9	0.9
21	0	1.5
22	1.5	1.5
23	1.4	0.8
24	3.1	0.2
25	3.7	3.8
26	4.0	4.1
27	1.0	0
28	0.9	0.6
29	3.0	3.1
30	0	0
31	0.2	0
32	1.7	1.6
33	0	0.2
34	2.9	1.6
35	3.1	3.0
36	3.1	3.1
37	0	0
38	0	0
39	2.9	2.9
40	0.3	0.2
41	1.5	1.5
42	3.1	3.1
43	3.0	3.0
44	0	0
45	3.0	3.0
46	2.8	2.8
47	2.4	2.4
48	2.3	2.4
IC8001	-	-
IC8002		
1	3.0	3.1
2	0	0
3	3.1	3.1
4	0	0
5	0	0
6	0	0
7	0	0
8	0	0
9	3.0	3.1
10	0	0
11	0	0
12	0	0
13	0	0
14	0	0
15	0	3.0
16	0	0
17	3.0	3.1
18	3.0	3.0
19	3.0	3.1
20	3.0	3.0
21	0	0
22	0	0
23	0	0
24	0	0
25	0	0
26	0	0
27	0	0
28	0	0
29	3.0	3.0
30	0	0
31	0	0
32	0	0
33	0	0
34	0	0
35	3.0	3.0
36	0	0
37	3.1	3.0
38	0	0
39	0	0
40	0	0
41	0	0
42	0	0
43	0	0
44	0	0
45	0	0
46	0	0
47	0	0
48	0	0
49	3.1	3.1
50	0	0
51	0	0
52	0	0
53	0	0
54	0	0
55	2.9	3.1
56	0	0
57	0	0
58	0	0
59	0	0
60	0	0
61	0	0
62	0	0
63	0	0
64	0	0
65	0	0
66	0	0
67	0	0
68	0	0
69	0	0
70	0	0
71	0	0
72	0	0
73	0	0
74	0	0
75	3.1	3.0
76	0	0
77	0	0
78	0	0
79	0	0
80	0	0
81	3.0	3.0
82	0	0
83	0	0
84	0	0
85	0	0
86	0	0
IC8003	-	-
IC8005		
1	3.0	3.0
2	0	0
3	3.0	3.0
4	0	0
5	1.8	1.8
IC8601	-	-
Q1001		
E	3.0	3.0
C	3.1	3.0
B	3.0	3.0
Q1002		
1	0	0
2	3.0	3.0
3	3.0	3.0
4	2.8	2.8
5	0	0
Q1003		
1	0	0
2	0	0
3	2.9	0
4	-0.1	0
5	3.0	3.0
Q1005		
1	0	0
2	3.0	0
3	2.9	3.0
4	2.9	2.9
5	0	0
Q1006		
E	0	0
C	3.1	3.0
B	0.5	0.5
Q1007		
E	0	0
C	0	0
B	0	3.0
Q1008		
E	0	3.1
C	1.4	3.0
B	0	3.0
Q1009		
E	0	0
C	0	0
B	0	0
Q1011		
E	0	0
C	3.0	3.0
B	0	0
Q2201		
E	0	0
C	1.5	1.5
B	0	0
Q2202		
1	0	0
2	0	0
3	0	0
4	0	0
5	0	0
6	0	0
Q2401		
E	4.1	4.4
C	4.8	4.7
B	4.7	4.8
Q2403		
E	3.0	3.1
C	4.8	4.7
B	3.7	3.7
Q3001		
E	3.2	3.1
C	4.7	4.8
B	3.8	3.8
Q3701		
1	1.1	1.1
2	0.5	0.5
3	0	0
4	0.9	1.0
5	0.4	0.4
6	0	0
Q3702	-	-
Q3705		
1	0.9	0.9
2	0.3	0.3
3	0	0
4	0.9	0.9
5	0.3	0.3
6	0	0
Q3706	-	-
Q3707	-	-
Q3731	-	-
Q3733	-	-
Q3734	-	-
Q3735	-	-
Q4951		
E	0	0
C	3.4	3.4
B	0	0
Q6101		
1	0	0
2	10.8	10.8
3	7.5	4.6
4	2.9	2.9
5	2.9	2.9
6	2.9	2.9
Q6103		
S	1.2	1.2
D	3.0	3.0
G	2.5	2.5
Q6201		
1	0	0
2	10.8	10.8
3	8.9	8.8
4	1.6	1.5
5	1.6	1.5
6	1.5	1.6
Q6301		
1	0	0
2	10.8	10.8
3	8.2	8.1
4	2.9	2.8
5	2.9	2.9
6	2.8	2.8
Q6401		
1	0	0
2	10.7	10.8
3	9.5	9.4
4	1.0	1.0
5	1.0	1.0
6	1.0	1.0
Q6501		
S	7.5	7.6
D	10.8	10.8
G	0	0
Q6502		
1	-7.1	-7.1
2	-7.6	-7.6
3	-15.3	-15.4
4	-7.1	-7.2
5	-7.7	-7.8
6	-13.3	-15.0
Q6503		
E	-13.8	-15.4
C	-7.7	-7.8
B	-13.2	-14.9
Q6701		
S	6.0	6.0
D	10.8	10.8
G	4.8	4.8
Q6702		
S	9.6	9.6
D	4.8	4.8
G	0	0
Q6703		
S	0	0
D	4.8	4.8
G	4.8	4.8
Q6704		
E	4.8	4.8
C	0.7	0.7
B	4.8	4.8
Q6705		
E	0	0
C	4.8	4.8
B	0	0
Q7701		
1	10.1	10.1
2	10.6	10.6
3	10.9	10.9
4	9.9	9.9
5	10.6	10.6
6	10.6	10.7
Q7702		
1	3.4	3.4
2	4.0	4.0
3	14.8	14.9
4	4.9	4.9
5	5.5	5.5
6	5.5	5.5
Q7703		
1	3.4	3.4
2	4.0	4.0
3	14.8	14.8
4	4.9	4.9
5	5.5	5.5
6	5.5	5.5
Q7704		
1	3.4	3.4
2	4.0	4.0
3	14.8	14.8
4	4.9	5.0
5	5.5	5.5
6	5.5	5.5
Q7705		
1	8.5	8.5
2	9.1	9.1
3	11.6	11.6
4	8.4	8.4
5	9.1	9.1
6	9.1	9.1
Q7706		
1	0	0
2	3.0	3.0
3	14.8	14.8
4	14.9	14.9
5	0	0
6	0	0
Q8601		
1	0	0
2	3.0	3.0
3	0	0
4	0	0
5	0	0
6	0	0

<CCD>

MODE PIN NO.	REC	PLAY
IC5001		
1	11.3	10.7
2	0	0
3	0	0
4	-0.2	14.9
5	-0.2	0
6	-7.2	14.9
7	-7.2	0
8	9.8	9.8
9	1.3	0
10	1.6	0
11	-7.7	-7.8
12	9.7	9.3
13	12.8	12.7
14	14.9	14.9
Q5001		
E	10.5	9.9
C	14.9	14.9
B	11.2	10.7
Q5002		
E	0	0
C	9.7	9.8
B	0	0

<PRE/MDA>

MODE PIN NO.	REC	PLAY
IC1601		
1	0	0
2	0.4	0.4
3	0.3	0.5
4	0	0
5	0.4	0.3
6	0	0
7	0	0
8	1.5	1.5
9	1.5	1.5
10	1.5	1.5
11	1.5	1.5
12	1.4	1.4
13	1.5	1.5
14	2.7	2.7
15	1.2	1.2
16	1.5	1.5
17	1.5	1.5
18	1.5	1.5
19	1.5	1.5
20	1.4	1.5
21	3.0	3.0
22	0.7	0.6
23	0.4	0.4
24	1.4	1.4
25	1.3	1.4
26	10.8	10.8
27	0	0
28	2.9	2.9
29	0.7	0.8
30	1.3	1.3
31	0.7	0.7
32	0.9	0.9
33	0	1.4
34	1.4	1.4
35	1.3	1.4
36	0	0
37	1.4	1.4
38	0	0
39	1.5	1.4
40	0	0
41	0	0
42	0	0
43	0	0
44	0	0
45	4.8	4.7
46	1.5	1.4
47	1.5	1.4
48	1.5	1.5
49	1.5	1.5
50	0	0
51	13.7	13.7
52	2.3	2.3
53	12.3	12.3
54	0	0
55	0	0
56	0	0
57	3.0	3.0
58	2.9	2.9
59	0	0
60	1.1	1.1
61	0.3	0.2
62	1.5	1.5
63	0.6	0.6
64	0.9	0.9
IC1701		
1	-	-
2	1.4	1.4
3	1.4	1.4
4	0	0
5	1.4	1.4
6	1.3	1.4
7	-	-
8	4.8	4.8
IC1702		
1	0	3.0
2	1.3	1.4
3	-	-
4	0	0
5	-	-
6	1.4	1.4
7	-	-
8	4.8	4.8
IC3501	-	-
Q1601		
1	0	0
2	0	0
3	4.8	4.8
4	0	0
5	0	4.8

<MONITOR>

MODE PIN NO.	REC	PLAY
IC7601		
1	3.0	3.1
2	2.9	3.0
3	0	0
Q7501		
E	0	0
C	0	0
B	3.0	3.0
Q7502		
E	4.6	4.6
C	4.5	4.5
B	0	0
Q7503		
E	-0.5	-0.5
C	4.5	4.5
B	0	0
Q7504		
E	-0.5	-0.5
C	4.5	4.5
B	0	0

<FRONT>

MODE PIN NO.	REC	PLAY
IC701		
1	4.5	4.5
2	0	0
3	4.7	4.7
Q701		
E	0	0
C	4.5	4.5
B	-	-
Q702		
1	0	0
2	0	0
3	0	0
4	0	0
5	0.8	0.8
6	2.5	2.5
Q703		
1	0	0
2	0	0
3	0	0
4	0	0
5	0.8	0.8
6	2.5	2.5
Q704		
E	0	0
C	0	0
B	0.6	0.6

<VF>

MODE PIN NO.	REC	PLAY
Q7001		
E	0.6	0.6
C	0	0
B	0.7	0.7

JVC
Victor Company of Japan, Limited
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(No.YF080)

Printed in Japan
VPT

PARTS LIST

SAFETY PRECAUTION

Parts identified by the ⚠ symbol are critical for safety. Replace only with specified part numbers.

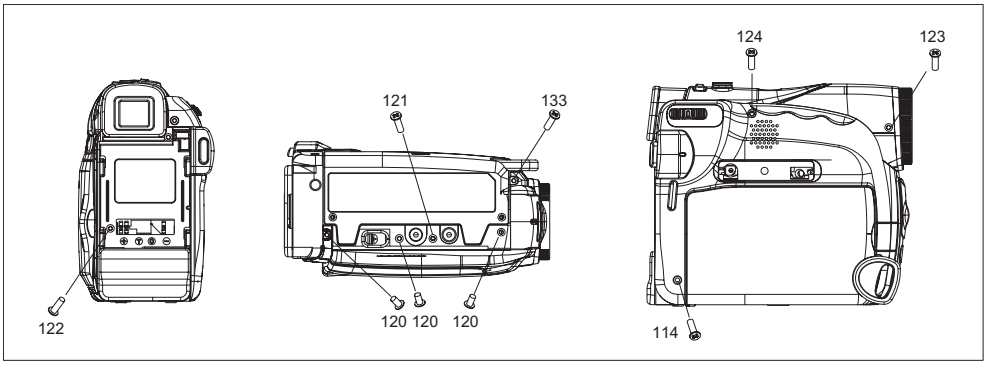
BEWARE OF BOGUS PARTS

Parts that do not meet specifications may cause trouble in regard to safety and performance. We recommend that genuine JVC parts be used.

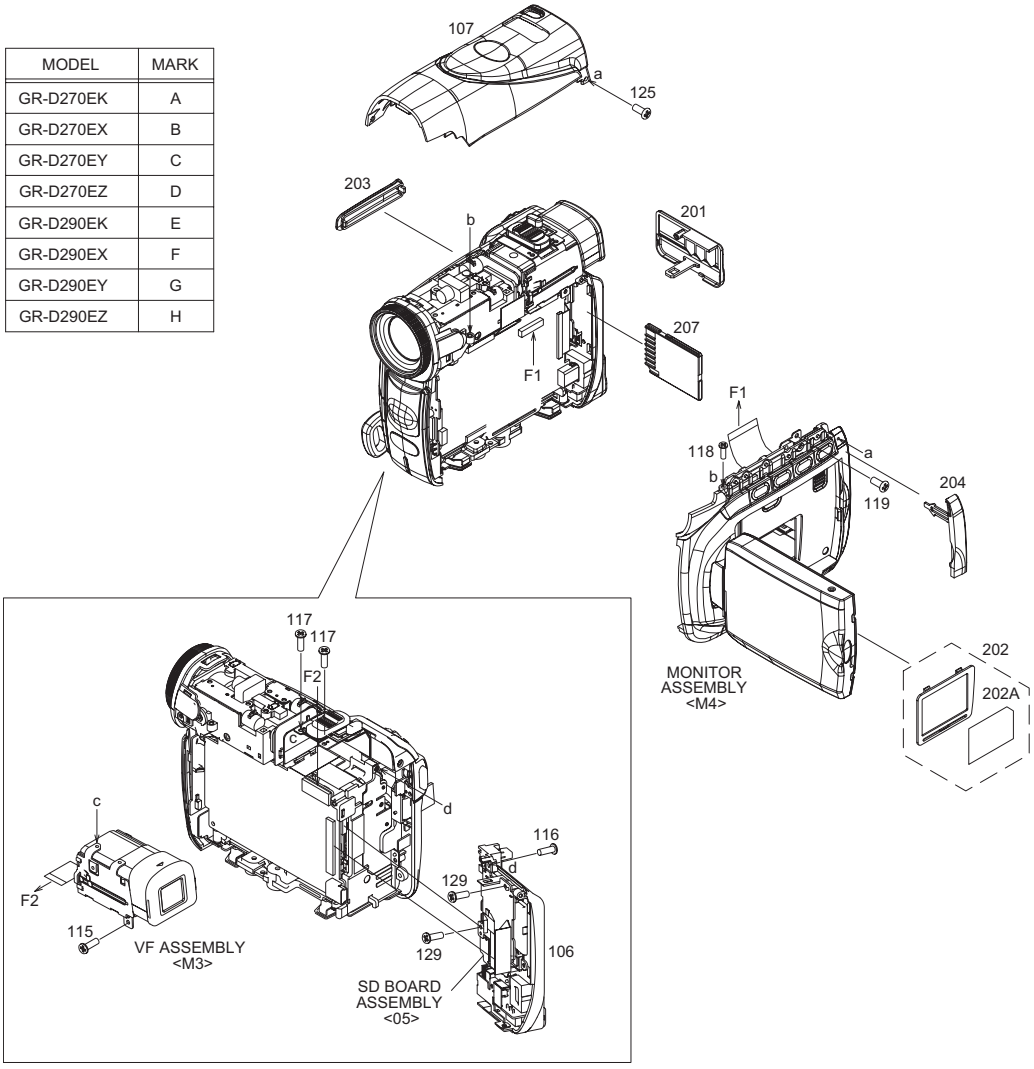
1. EXPLODED VIEW

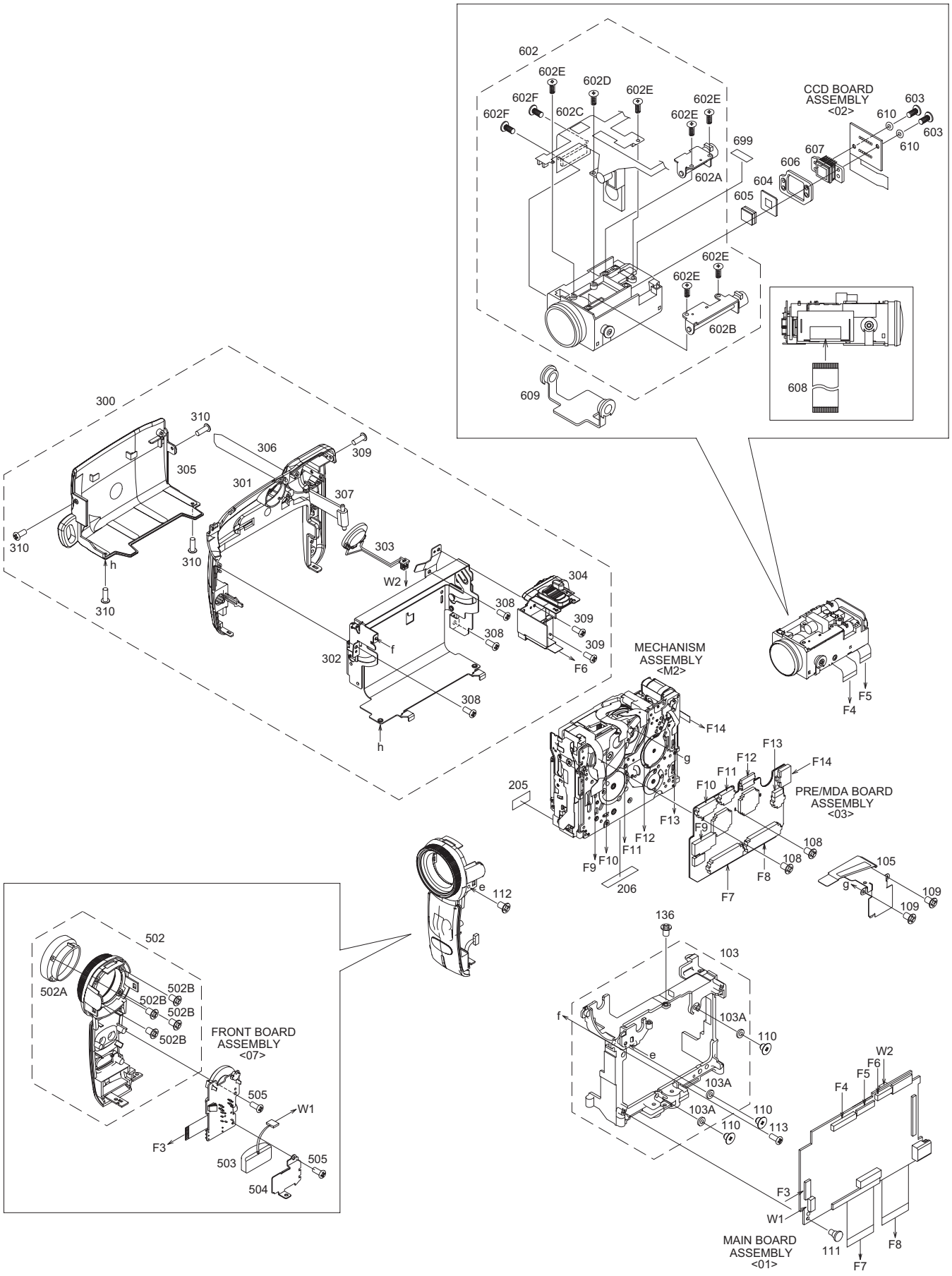
1.1 FINAL ASSEMBLY <M1>

The instruction manual to be provided with this product will differ according to the destination.

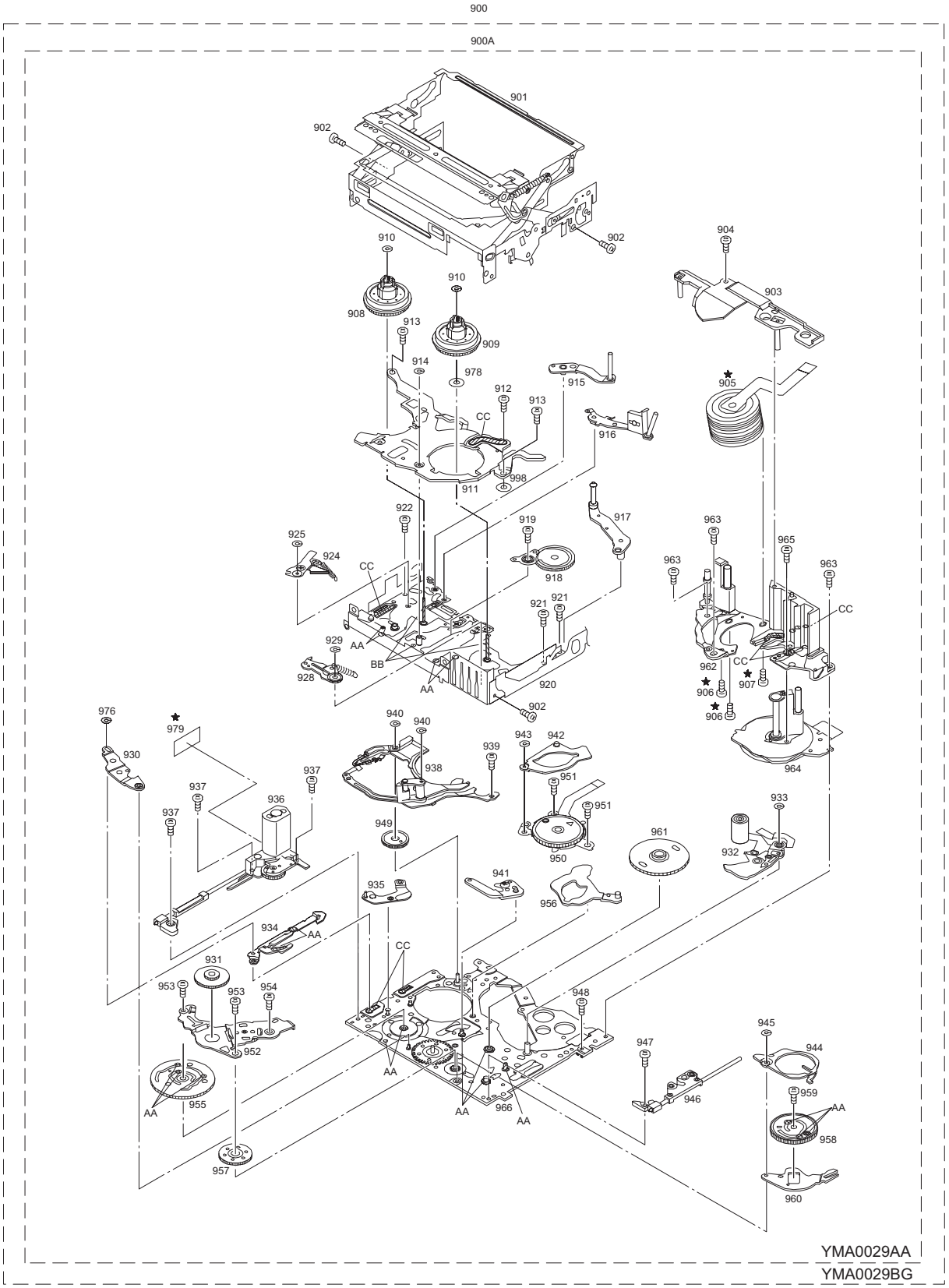


MODEL	MARK
GR-D270EK	A
GR-D270EX	B
GR-D270EY	C
GR-D270EZ	D
GR-D290EK	E
GR-D290EX	F
GR-D290EY	G
GR-D290EZ	H




602
602E
602D
602F
602C
602A
602B
699
CCD BOARD ASSEMBLY <02>
603
610
607
606
604
605
608
609
300
310
305
306
309
301
307
303
W2
304
308
302
f
h
MECHANISM ASSEMBLY <M2>
F14
F13
F12
F11
F10
F9
F8
F7
F6
F5
F4
g
205
206
PRE/MDA BOARD ASSEMBLY <03>
108
105
109
112
e
136
103
103A
110
113
W2
W1
111
MAIN BOARD ASSEMBLY <01>
502
502A
502B
FRONT BOARD ASSEMBLY <07>
505
503
504

1.2 MECHANISM ASSEMBLY <M2>

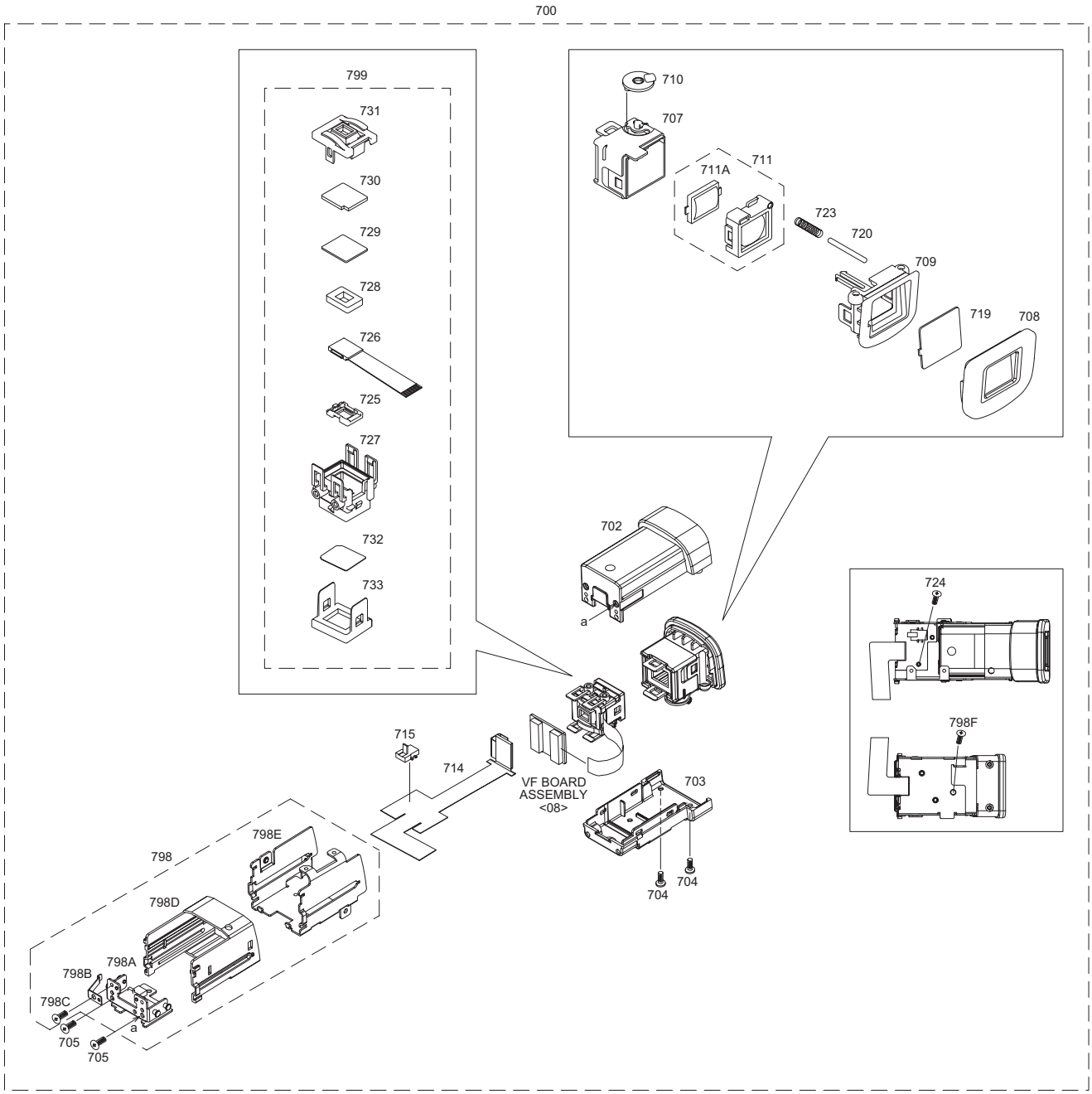


Classification	Part No.	Symbol in drawing
Grease	KYODO-SH-JB	AA
Oil	YTU94027	BB
Grease (HANARL)	RX-410R	CC

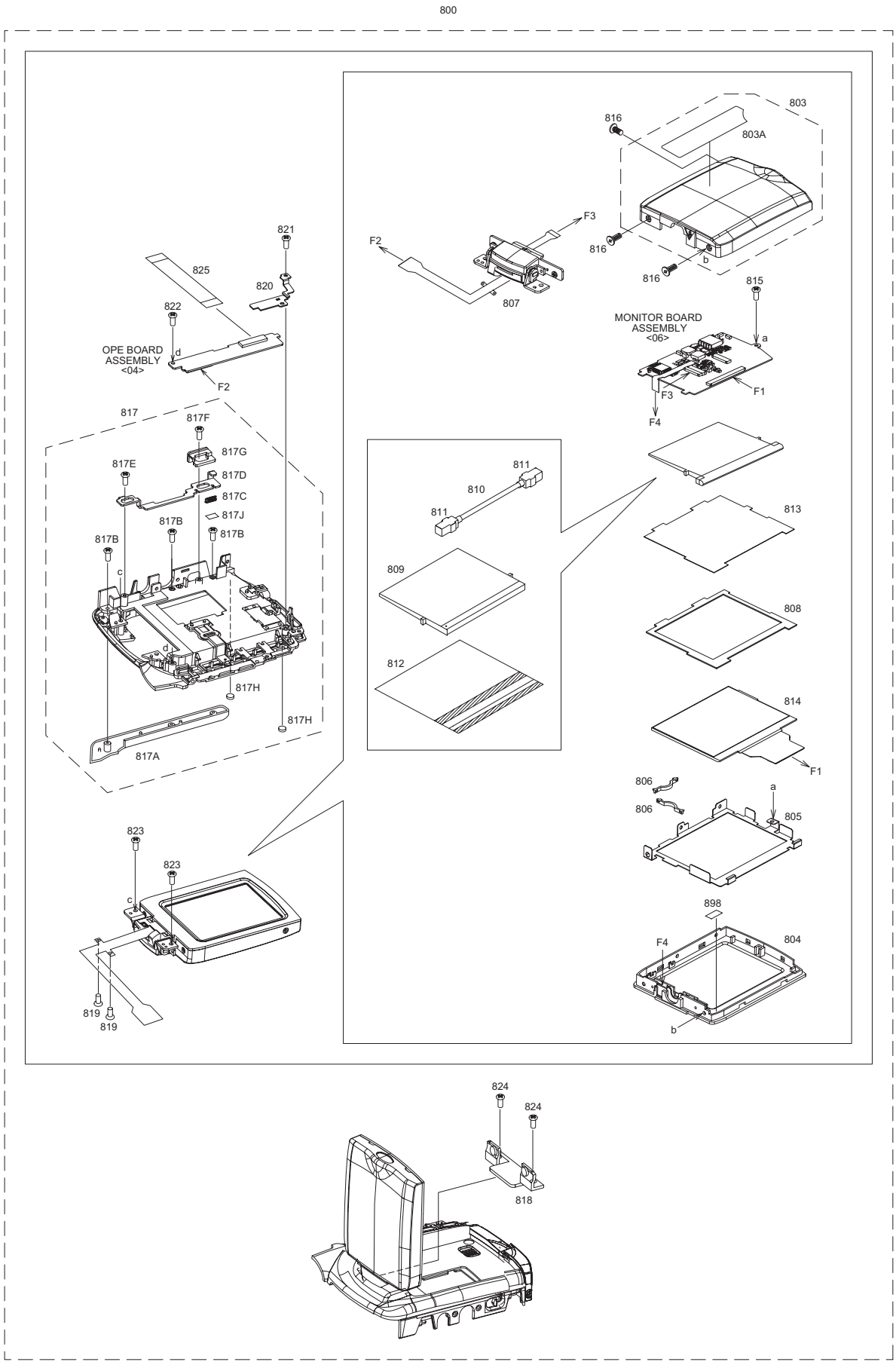
NOTE1: The section marked in AA, BB and CC indicate lubrication and greasing areas.

NOTE2: Mark ★ is not contained in 900A.

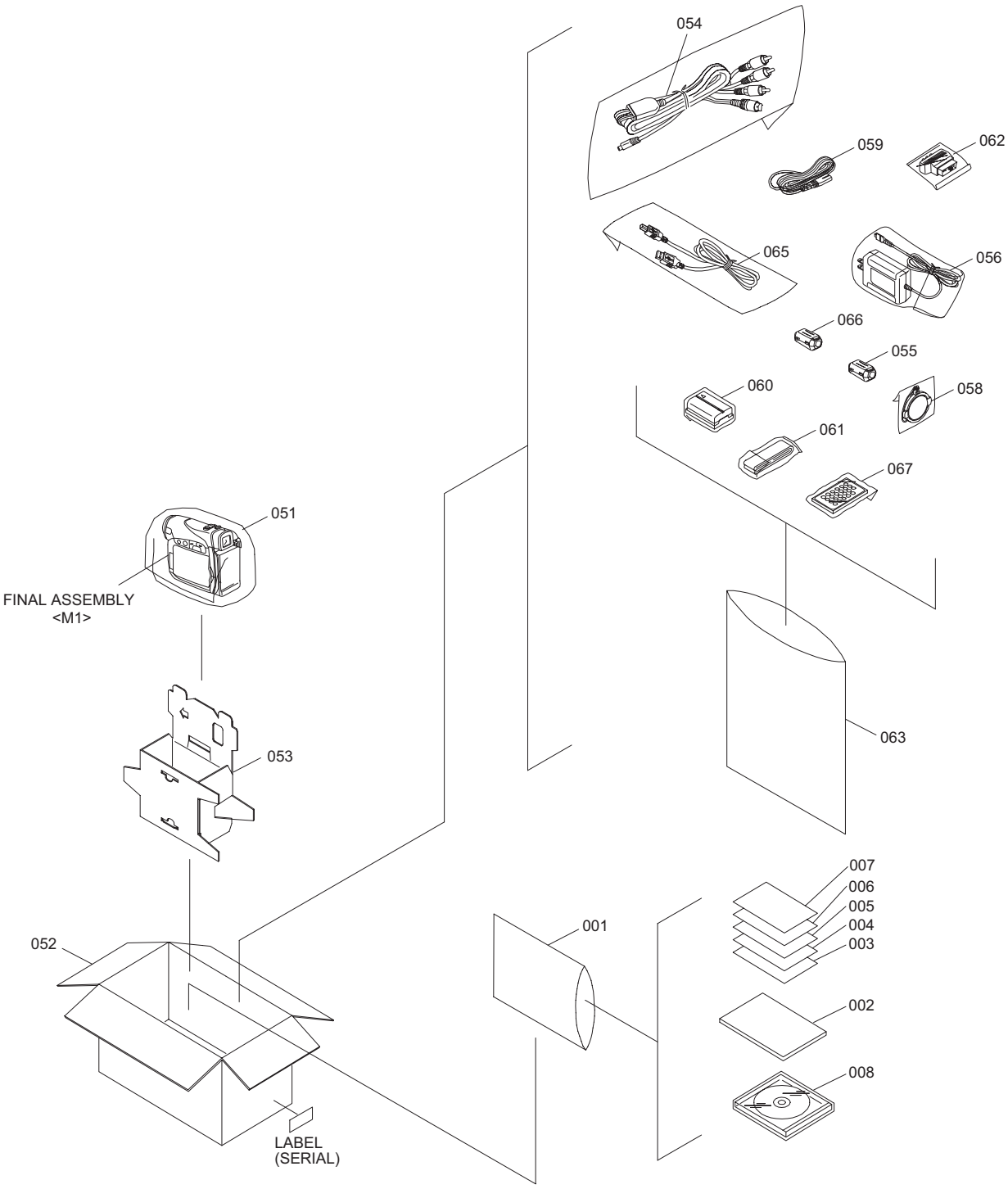
1.3 VF(COLOR) ASSEMBLY <M3>



1.4 MONITOR ASSEMBLY <M4>



1.5 PACKING AND ACCESSORY ASSEMBLY <M5>



MODEL	MARK	MODEL	MARK	MODEL	MARK
GR-D270EK	A	GR-D270EZ	D	GR-D290EY	G
GR-D270EX	B	GR-D290EK	E	GR-D290EZ	H
GR-D270EY	C	GR-D290EX	F		

2. PARTS LIST

FINAL ASSEMBLY <M1>

⚠ Symbol No.	Part No.	Part Name	Description	Local
103	LY34543-001C	FRAME(Z27)ASSY		
103A	LY45033-001A	BUSH	(x3)	
105	LY34542-001A	S.COVER(PR)		
⚠ 106	LY21323-003F	REAR UNIT		
107	LY34567-002D	T.COVER ASSY		A,B,C,D
107	LY34567-001D	T.COVER ASSY		E,F,G,H
108	LY30031-015A	SPECIAL SCREW	MC-PRE/MDA(x2)	
109	LY30031-015A	SPECIAL SCREW	MCHA-SHLD(x2)	
110	LY30032-002A	SPECIAL SCREW	FRM-MCA(x3)	
111	LY30031-0H2B	SPECIAL SCREW	FRM-MAIN	
112	LY30031-0H2B	SPECIAL SCREW	FRM-FRONT	
113	LY30031-0D4A	SPECIAL SCREW	FRM-BKT(AR)	
114	LY30031-0D4A	SPECIAL SCREW	LOWER-REAR	
115	LY30031-0H2B	SPECIAL SCREW	FRM-VF	
116	LY30031-0H2B	SPECIAL SCREW	FRM-REAR	
117	LY30031-0H5A	SPECIAL SCREW	VF-ZOOM(x2)	
118	LY30031-0H2B	SPECIAL SCREW	FRM-UPPER	
119	LY30031-0H5A	SPECIAL SCREW	VF-BKT(OPE)	
120	LY30031-0D5A	SPECIAL SCREW	FRM-UPPER(x3)	
121	LY30031-0D5A	SPECIAL SCREW	BK(HNG)-UP	
122	LY30031-008A	SPECIAL SCREW	UPPER-REAR	
123	LY30031-0H2B	SPECIAL SCREW	FRM-TOP	
124	LY30031-0D5A	SPECIAL SCREW	VF-TOP	
125	LY30031-008A	SPECIAL SCREW	REAR-TOP	
129	LY30031-008A	SPECIAL SCREW	FOR SD PWB(x2)	
133	LY30031-0D5A	SPECIAL SCREW	LOWER-FRM	
136	LY30031-0D4A	SPECIAL SCREW	FRM-SHLD	
201	LY34552-001B	JACK COVER(REAR)		
202	LY44931-002D	COVER(JIG)ASSY		
202A	LY34661-001B	C.LABEL(VF)		A,B,C,D
203	LY34569-001D	COVER(ADJUST)		
204	LY34557-001B	COVER(SD) ASSY		
205	LY40699-002A	LABEL(PUSH)		
206	LY32001-004A	LABEL(HOUSING)		
207	QAM0467-002	MEMORY CARD	MMC 8MB*	E,F,G,H
300	LU05D203A	LOWER UNIT ASSY	JAPAN	
301	LY21345-002E	LOWER CASE ASSY		
302	LY34540-001D	ARM ASSY		
303	QAS0284-001	SPEAKER		
304	LY10548-001D	ZOOM UNIT		
305	LY10549-001C	CASSETTE COVER		
306	LY21320-001A	GRIP BELT		
307	LY44829-001A	SHAFT(G.BELT)		
308	LY30031-008A	SPECIAL SCREW	LOWER-ARM(x3)	
309	LY30031-008A	SPECIAL SCREW	LOWER-ZOOM(x3)	
310	LY30031-0H5A	SPECIAL SCREW	C.COV-ARM(x4)	
502	LY34545-001F	F.COVER ASSY		
502A	LY34546-001A	HOOD(SCREW)		
502B	LY30031-034A	SPECIAL SCREW	(x4)	
503	LY34598-001A	MIC		
504	LY34551-001B	PLATE(MIC)		
505	LY30031-003A	SPECIAL SCREW	(x2)	
602	LY34620-001B	OP BLOCK ASSY		
602A	PTY34620-002	FOCUS MOTOR UNIT		
602B	PTY34620-001	ZOOM MOTOR UNIT		
602C	PTY34620-006	AUTO IRIS UNIT		
602D	PTY34620-535	TAP SCREW		
602E	PTY34620-530	TAP SCREW	(x6)	
602F	PTY34620-525	TAP SCREW	(x2)	
603	LY30031-038A	TAP SCREW	(x2)	
604	LY44893-001A	SHEET		
605	LY44927-001A	O.LPF		
606	LY34628-001A	SPACER		
607	LYH30605-001A	CCD BASE ASSY		
608	QUQ105-2404BA-E	FFC WIRE	24pin 4cm	
609	LY44831-001A	BUSH(OP)		
610	LY44159-001A	WASHER	(x2)	
699	LY30034-0S5A	SPACER(A)		

***NOTE:**
DATA FILE is not contained in MEMORY CARD of the service part.

MECHANISM ASSEMBLY <M2>

⚠ Symbol No.	Part No.	Part Name	Description	Local
900	YMA0029BG	MECHA(A)ASSY	Y/E Y08173	
900A	YMA0029AA	MECHA(A)ASSY	JVM/BJVC	
901	LY32870-001Q	CASSETTEHOUSING ASSY		
902	YQ43893-8	MINI SCREW	(x3)	
903	LYH30420-001A	UPPER BASE ASSY		
904	QYSPSPU1425M	SCREW	M1.4 x 2.5mm	
905	YDV2102E	DRUM ASSY	M/B SET022	
906	LY44533-001A	DAMP.SCREW ASSY	JVM/BJVC(x2)	
907	LY44533-002A	DAMP.SCREW ASSY		
908	LY31538-001G	REEL DISK ASSY		
909	LY31538-002J	REEL DISK ASSY		
910	YQ44246	SLIT WASHER	(x2)	
911	LY10372-001K	REEL COVER ASSY		
912	LY42120-002A	MINI SCREW		
913	LY41945-003A	MINI SCREW	(x2)	
914	YQ44246	SLIT WASHER		
915	LY43725-001G	TENSION ARM ASSY		
916	LYH40269-001A	SLANT POLE ARM ASSY		
917	LY43731-001G	TAKE UP ARM ASSY		
918	LY31531-001E	SWING ARM ASSY		
919	YQ43893-9	MINI SCREW		
920	LYH30424-001A	SLIDE DECK FINAL ASSY		
921	YQ43893	MINI SCREW	(x2)	
922	LY43023-001A	MINI SCREW		
924	LYH30419-001A	PAD ARM ASSY		
925	YQ44246	SLIT WASHER		
928	LYH40270-001A	TAKE UP BRAKE ASSY		
929	YQ44246	SLIT WASHER		
930	LY43684-001C	TENSION CONTROL LEVER ASSY		
931	LY32861-001B	CENTER GEAR		
932	LY31516-001J	PINCH ROLLER ARM FINAL ASSY		
933	YQ44246	SLIT WASHER		
934	LY43681-001B	TENSION CONTROL PLATE ASSY		
935	LY43687-001A	BRAKE CONTROL LEVER ASSY		
936	LYH30421-001A	MOTOR BRACKET ASSY		
937	YQ43893	MINI SCREW	(x3)	
938	LYH30422-001A	GUIDE RAIL ASSY		
939	YQ43893	MINI SCREW		
940	YQ44246	SLIT WASHER	(x2)	
941	LY32843-001H	SLIDE LEVER2 ASSY		
942	LY43690-001C	LOADING PLATE ASSY		
943	YQ44246	SLIT WASHER		
944	LY32858-001B	EJECT LEVER		
945	YQ44246	SLIT WASHER		
946	LYH40271-001A	BASE R ASSY		
947	YQ43893	MINI SCREW		
948	LY41945-001B	MINI SCREW		
949	LY43665-001A	MODE GEAR		
950	QSW0876-005	ROTARY ENCODER		
951	YQ43893	MINI SCREW	(x2)	
952	LY32860-001E	GEAR COVER ASSY		
953	YQ43893	MINI SCREW	(x2)	
954	YQ43893-4	MINI SCREW		
955	LY43676-001B	MAIN CAM ASSY		
956	LY41941-001B	SLIDE ARM ASSY		
957	LY43678-001A	CONNECT GEAR 2		
958	LY43679-001C	SUB CAM ASSY		
959	LY42120-001A	MINI SCREW		
960	LY43692-001B	CONTROL ARM ASSY		
961	LY32859-001A	REEL GEAR 1		
962	LY31508-003F	DRUM BASE ASSY		
963	LY43675-006B	MINI SCREW	(x3)	
964	QAR0142-001	CAPSTAN MOTOR		
965	YQ43893	MINI SCREW		
966	LY10367-001N	MAIN DECK ASSY		
976	YQ44246	SLIT WASHER		
978	LY44609-001A	WASHER		
979	LY44502-001A	SPACER	JVM/BJVC	
998	QYWFM163013	WASHER	6.3mm/21.1mm x 0.01mm	

MODEL	MARK	MODEL	MARK	MODEL	MARK
GR-D270EK	A	GR-D270EZ	D	GR-D290EY	G
GR-D270EX	B	GR-D290EK	E	GR-D290EZ	H
GR-D270EY	C	GR-D290EX	F		

VF(COLOR) ASSEMBLY <M3>

⚠ Symbol No.	Part No.	Part Name	Description	Local
700	VU05D201A	VF UNIT ASSY	JAPAN	
702	LY21328-001C	U.CASE(VF)		
703	LY21329-001D	B.CASE(VF)		
704	LY30031-008A	SPECIAL SCREW	B.CASE/U.C(x2)	
705	LY30031-008A	SPECIAL SCREW	B.CASE/H.L(x2)	
707	LY21332-001C	GUIDE(LENS)		
708	LY34589-001B	EYE CUP		
709	LY21333-001C	HOLDER(EYE)		
710	LY34593-001C	LEVER(VF)		
711	LY44841-001D	LENS ASSY		
711A	LY34592-001C	LENS HOLDER		
714	QAL0660-002	FPC		
715	NSW0245-001X	LEVER SWITCH		
719	LY44843-001B	SHEET(LENS)		
720	LY44847-001A	SHAFT(VF)		
723	LY30002-055A	COMPRESSION SPRING		
724	LY30031-0H5A	SPECIAL SCREW	SW PWB	
725	LY34584-001A	GUIDE(LCD)		
726	QLD0356-001	LCD MODULE		
727	LY21330-001B	HOLDER(LCD)		
728	LY44848-001B	CUSHION(LCD)		
729	LY44844-001A	SHEET(POLA.1)		
730	LY44846-001A	SHEET(DIFF)		
731	LY34590-001B	CASE(B.LIGHT)		
732	LY44845-001A	SHEET(POLA.2)		
733	LY34591-001A	STOPER(POLA)		
798	LY34947-001A	VF SLIDE ASSY		
798A	LY34597-001B	BKT(HINGE VF)ASSY		
798B	LY34596-001A	CLICK PLATE		
798C	LY30031-0H5A	SPECIAL SCREW	BKT/CLICK	
798D	LY21331-001D	GUIDE(CASE)		
798E	LY34595-001G	BKT(HOLDER)		
798F	LY30031-026A	SPECIAL SCREW		
799	LY34844-001D	LCD UNIT ASSY		

MONITOR ASSEMBLY <M4>

⚠ Symbol No.	Part No.	Part Name	Description	Local
⚠ 800	MU05D210B	M.UNIT ASSY		A,B,C,D
⚠ 800	MU05D208B	M.UNIT ASSY		E,F,G,H
⚠ 803	LY34894-006A	M.COVER ASSY		A,B,C,D
⚠ 803	LY34894-004A	M.COVER ASSY		E,F,G,H
803A	LY34856-004A	STICKER		A,B,C,D
803A	LY34856-005A	STICKER		E,F,G,H
804	LY10551-002F	MONITOR CASE		A,B,C,D
804	LY10551-001F	MONITOR CASE		E,F,G,H
805	LY21335-001A	S. CASE(MON)		
806	LY34585-001A	SPRING(LCD)	(x2)	
807	LY34523-002C	HINGE UNIT ASSY		A,B,C,D
807	LY34523-001C	HINGE UNIT ASSY		E,F,G,H
808	LY44839-001B	SPACER(LCD)		
809	LY44832-001A	LIGHT SCREEN		
810	QLL0168-001	LAMP		
811	LY44850-001A	HOLDER(LAMP)	(x2)	
812	LY44833-001A	SHEET(REFLECT)		
813	LY44840-001B	DIFF.SHEET		
814	QLD0357-001	LCD MODULE		
815	LY30031-0D4A	SPECIAL SCREW	M.PWB-S.C	
816	LY30031-0D4A	SPECIAL SCREW	MCOV-MCAS(x3)	
⚠ 817	LY21324-008F	U.CASE ASSY		A,B,C,D
⚠ 817	LY21324-004F	U.CASE ASSY		E,F,G,H
817A	LY34553-001C	COVER(UPPER)		
817B	LY30031-008A	SPECIAL SCREW	C.(UP)-UP(x3)	
817C	LY30002-061A	COMPRESSION SPRING		
817D	LY34583-001C	PLATE(LOCK)		
817E	LY30031-011A	SPECIAL SCREW	U-P(LOCK)	
817F	LY30032-007A	SPECIAL SCREW	U-P(LOCL)	
817G	LY34561-001B	KNOB(EJECT)		
817H	LY42350-003A	FOOT	(x2)	
817J	LY30034-0Q3A	SPACER(A)		
818	LY34563-001B	COVER(HINGE)		
819	LY30031-0H5A	SPECIAL SCREW	C(HNG)-FP(x2)	
820	LY34564-001A	BKT(OPE PWB)		
821	LY30031-008A	SPECIAL SCREW	U-BKT(OPE)	
822	LY30031-0H5A	SPECIAL SCREW	B(HNG)-OP	
823	LY30031-054A	SPECIAL SCREW	UP-HINGE(x2)	
824	LY30031-0H5A	SPECIAL SCREW	B(H)-C(H)(x2)	
825	WJT0174-001B	E-CARD WIRE		
898	LY30034-0S7A	SPACER(A)		

PACKING AND ACCESSORY ASSEMBLY <M5>

⚠ Symbol No.	Part No.	Part Name	Description	Local
001	LY34452-001A	POLY BAG	DOCUMENT	
⚠ 002	LYT1381-001A	INST BOOK(EN)	(ENGLISH)	A,E
⚠ 002	LYT1381-003A	INST BOOK(FR)	(FRENCH)	B,F
⚠ 002	LYT1381-004A	INST BOOK(DU)	(DUTCH)	B,F
⚠ 002	LYT1381-005A	INST BOOK(SP)	(SPANISH)	B,F
⚠ 002	LYT1381-006A	INST BOOK(IT)	(ITALIAN)	B,F
⚠ 002	LYT1381-015A	INST BOOK(PT)	(PORTUGUESE)	B,F
⚠ 002	LYT1381-002A	INST BOOK(GE)	(GERMAN)	B,C,F,G
⚠ 002	LYT1381-007A	INST BOOK(DA)	(DANISH)	C,G
⚠ 002	LYT1381-008A	INST BOOK(FI)	(FINN)	C,G
⚠ 002	LYT1381-009A	INST BOOK(SW)	(SWEDISH)	C,G
⚠ 002	LYT1381-010A	INST BOOK(NO)	(NORWEGIAN)	C,G
⚠ 002	LYT1381-011A	INST BOOK(RU)	(RUSSIAN)	D,H
⚠ 002	LYT1381-012A	INST BOOK(CZ)	(CZECH)	D,H
⚠ 002	LYT1381-013A	INST BOOK(PO)	(PORTUGUESE)	D,H
⚠ 002	LYT1381-014A	INST BOOK(HU)	(HUNGARIAN)	D,H
003	LYT1356-001A	INST BOOK(SOFT.EN)	(SOFT.ENGLISH)	A
003	LYT1356-003A	INST BOOK(SOFT.FR)	(SOFT.FRENCH)	B
003	LYT1356-004A	INST BOOK(SOFT.DU)	(SOFT.DUTCH)	B
003	LYT1356-005A	INST BOOK(SOFT.SP)	(SOFT.SPANISH)	B
003	LYT1356-006A	INST BOOK(SOFT.IT)	(SOFT.ITALIAN)	B
003	LYT1356-018A	INST BOOK(SOFT.PT)	(SOFT.PORTUGUESE)	B
003	LYT1356-002A	INST BOOK(SOFT.GE)	(SOFT.GERMAN)	B,C
003	LYT1356-007A	INST BOOK(SOFT.DA)	(SOFT.DANISH)	C
003	LYT1356-008A	INST BOOK(SOFT.FI)	(SOFT.FINN)	C
003	LYT1356-009A	INST BOOK(SOFT.SW)	(SOFT.SWEDISH)	C
003	LYT1356-010A	INST BOOK(SOFT.NO)	(SOFT.NORWEGIAN)	C
003	LYT1356-011A	INST BOOK(SOFT.RU)	(SOFT.RUSSIAN)	D
003	LYT1356-012A	INST BOOK(SOFT.CZ)	(SOFT.CZECH)	D
003	LYT1356-013A	INST BOOK(SOFT.PO)	(SOFT.PORTUGUESE)	D
003	LYT1356-014A	INST BOOK(SOFT.HU)	(SOFT.HUNGARIAN)	D
003	LYT1387-001A	INST BOOK(SOFT.EN)	(SOFT.ENGLISH)	E
003	LYT1387-003A	INST BOOK(SOFT.FR)	(SOFT.FRENCH)	F
003	LYT1387-004A	INST BOOK(SOFT.DU)	(SOFT.DUTCH)	F
003	LYT1387-005A	INST BOOK(SOFT.SP)	(SOFT.SPANISH)	F
003	LYT1387-006A	INST BOOK(SOFT.IT)	(SOFT.ITALIAN)	F
003	LYT1387-018A	INST BOOK(SOFT.PT)	(SOFT.PORTUGUESE)	F
003	LYT1387-002A	INST BOOK(SOFT.GE)	(SOFT.GERMAN)	F,G
003	LYT1387-007A	INST BOOK(SOFT.DA)	(SOFT.DANISH)	G
003	LYT1387-008A	INST BOOK(SOFT.FI)	(SOFT.FINN)	G
003	LYT1387-009A	INST BOOK(SOFT.SW)	(SOFT.SWEDISH)	G
003	LYT1387-010A	INST BOOK(SOFT.NO)	(SOFT.NORWEGIAN)	G
003	LYT1387-011A	INST BOOK(SOFT.RU)	(SOFT.RUSSIAN)	H
003	LYT1387-012A	INST BOOK(SOFT.CZ)	(SOFT.CZECH)	H
003	LYT1387-013A	INST BOOK(SOFT.PO)	(SOFT.PORTUGUESE)	H
003	LYT1387-014A	INST BOOK(SOFT.HU)	(SOFT.HUNGARIAN)	H
004	YU30878	REGI. CARD		A,E
005	LYT0194-001B	Q.CARD		A,E
006	LYT1412-005A	SHEET(HEAD.EKEX)		A,B,E,F
006	LYT1412-006A	SHEET(HEAD.EY)		C,G
006	LYT1412-007A	SHEET(HEAD.EZER)		D,H
007	----------	WARRANTY CARD	BT-54026-1	
008	LY32210-0A3A	CD ROM ASSY		A,B,C,D
008	LY32210-0A6A	CD ROM ASSY		E,F,G,H
051	LY30023-003A	POLY BAG		
052	LY34576-010A	PACKING CASE		A,B,C,D
052	LY34576-006A	PACKING CASE		E,F,G,H
053	LY34578-001A	CUSHION		
054	QAM0663-001	MULTI CABLE	MULTI	
055	QQR0917-002	CORE FILTER	MULTI	C
⚠ 056	LY21104-001C	AC ADAPTER	AP-V14E	A,E
⚠ 056	LY21343-001A	AC ADAPTER	AP-V17E	B,C,D,F,G,H
058	LY34194-001A	HOOD CAP ASSY(N)		
⚠ 059	QMPP210-190-JR	POWER CORD(EK)	1.9m BLACK	A,E

MODEL	MARK	MODEL	MARK	MODEL	MARK
GR-D270EK	A	GR-D270EZ	D	GR-D290EY	G
GR-D270EX	B	GR-D290EK	E	GR-D290EZ	H
GR-D270EY	C	GR-D290EX	F		

⚠ Symbol No.	Part No.	Part Name	Description	Local
⚠ 060	LY34647-002B	BATTERY PACK	BN-VF707U	
061	LY21105-002A	SHOULDER STRAP		
062	QAM0302-001	ADAPTOR PLUG	PERI RCAS	
063	QPA02503505P	POLY BAG	ACC. 25cm x 35cm	
065	QAM0538-001	USB CABLE	USB	
066	QQR0491-002	FERRITE CORE	USB TDK (BLACK)	
067	LY21186-002A	REMOTE CTL UNIT	RM-V720U	

MAIN BOARD ASSEMBLY <01>

⚠ Symbol No.	Part No.	Part Name	Description	Local
PW1	LYA10025-02G	MAIN BOARD ASSY		A,B,C,D
PW1	LYA10025-01D	MAIN BOARD ASSY		E,F,G,H
IC1001	MN103S97NJC	IC(MICRO C ROM)	MASK	
IC1001 or	MN103SF66RJC	IC(MICRO C ROM)	FLASH	
IC1001 or	MN103SF66RJCA	IC(MICRO C ROM)	FLASH PP	
IC1002	BU3095-0FFV-X	IC	OSD KR	
IC1003	SN74AHC1G00DC-X	IC		
IC1004	NJU7108F3-X	IC		
IC1004 or	TC75S56FU-X	IC		
IC1005	M95320-WDW6-X	IC		
IC1005 or	BR25C320FV-W-X	IC		
IC1006	RS5C314-X	IC		
IC1007	S-80823CNNB-G-W	IC		
IC1007 or	S-80823CNNB-G-W	IC		
IC1009	SN74AHC1G08DC-X	IC		
IC2201	AK4660VQ	IC	48P0.5	
IC3001	JCY0205	IC	BGA SOCKET	
IC3201	JCP8075	IC		
IC3701	BH7612FV-X	IC	BH7612FV-X	
IC3731	MM1504XN-X	IC		
IC4201	HD49340NP-X	IC		
IC4202	MM1613AN-X	IC		
IC4901	JCY0214-X	IC		
IC4901 or	LY34853-001A	CSP IC ASSY		
IC4951	AN41902A	IC		
IC5501	JCY0185	IC		
IC6001	FA7725F	IC		
IC7801	AN2540FHQ	IC		
IC8001	TMS320DSC24GHKL	IC	DSC24	
IC8002	K4S643232H-UC60	IC	64MSDRAM	
IC8003	MBPL32BM90PBC07	IC(MICRO C ROM)	32MFLASH	A,B,C,D
IC8003	MBPL32BM90PBC04	IC(MICRO C ROM)		E,F,G,H
IC8005	BH18FB1WG-W	IC	REG 1.8V	
IC8601	PIX-MC20	IC		E,F,G,H
Q1001	DTA114EE-X	DIGI TRANSISTOR		
Q1001 or	PDTA114EE-X	DIGI TRANSISTOR		
Q1001 or	BCR183T-X	DIGI TRANSISTOR		
Q1001 or	UN9111J-X	DIGI TRANSISTOR		
Q1002	XP03311-W	DIGI TRANSISTOR		
Q1002 or	UMC3N-W	DIGI TRANSISTOR		
Q1003	XP03311-W	DIGI TRANSISTOR		
Q1003 or	UMC3N-W	DIGI TRANSISTOR		
Q1005	XP03311-W	DIGI TRANSISTOR		
Q1005 or	UMC3N-W	DIGI TRANSISTOR		
Q1006	2SC4617/QR/-X	TRANSISTOR		
Q1006 or	BC847BT-X	TRANSISTOR		
Q1006 or	2SD2216J/QR/-X	TRANSISTOR		
Q1006 or	2SC4738/YG/-X	TRANSISTOR		
Q1007	DTC124EE-X	DIGI TRANSISTOR		
Q1007 or	PDTC124EE-X	DIGI TRANSISTOR		
Q1007 or	BCR141T-X	DIGI TRANSISTOR		
Q1007 or	UN9212J-X	DIGI TRANSISTOR		
Q1008	DTC144EE-X	DIGI TRANSISTOR		
Q1008 or	PDTC144EE-X	DIGI TRANSISTOR		
Q1008 or	BCR148T-X	DIGI TRANSISTOR		
Q1008 or	UN9213J-X	DIGI TRANSISTOR		
Q1009	DTC143XE-X	DIGI TRANSISTOR		
Q1011	DTC144EE-X	DIGI TRANSISTOR		
Q1011 or	PDTC144EE-X	DIGI TRANSISTOR		
Q1011 or	BCR148T-X	DIGI TRANSISTOR		
Q1011 or	UN9213J-X	DIGI TRANSISTOR		
Q2201	DTC144EE-X	DIGI TRANSISTOR		
Q2201 or	PDTC144EE-X	DIGI TRANSISTOR		
Q2201 or	BCR148T-X	DIGI TRANSISTOR		
Q2201 or	UN9213J-X	DIGI TRANSISTOR		
Q2202	UMX1N-W	PAIR TRANSISTOR		
Q2202 or	PUMX1-W	PAIR TRANSISTOR		
Q2202 or	BC847S-X	PAIR TRANSISTOR		
Q2202 or	XP4501-W	TRANSISTOR		
Q2401	2SC4617/RS/-X	TRANSISTOR		
Q2401 or	BC847BT-X	TRANSISTOR		
Q2401 or	2SD2216J/RS/-X	TRANSISTOR		
Q2403	2SC4617/RS/-X	TRANSISTOR		
Q2403 or	BC847BT-X	TRANSISTOR		
Q2403 or	2SD2216J/RS/-X	TRANSISTOR		
Q3001	2SC4617/RS/-X	TRANSISTOR		AREG_3V
Q3001 or	BC847BT-X	TRANSISTOR		AREG_3V
Q3001 or	2SD2216J/RS/-X	TRANSISTOR		AREG_3V
Q3701	UMT1N-W	PAIR TRANSISTOR		
Q3701 or	XP4401-W	TRANSISTOR		
Q3701 or	BC856S-X	PAIR TRANSISTOR		
Q3701 or	PUMT1-W	PAIR TRANSISTOR		
Q3702	BC847PN-X	PAIR TRANSISTOR		BC847PN-X
Q3705	UMT1N-W	PAIR TRANSISTOR		
Q3705 or	XP4401-W	TRANSISTOR		
Q3705 or	BC856S-X	PAIR TRANSISTOR		
Q3705 or	PUMT1-W	PAIR TRANSISTOR		
Q3706	DTC114EE-X	DIGI TRANSISTOR		DTC114EE-X
Q3706 or	BCR133T-X	DIGI TRANSISTOR		
Q3706 or	UN9211J-X	DIGI TRANSISTOR		
Q3706 or	PDTC114EE-X	DIGI TRANSISTOR		
Q3707	DTC114EE-X	DIGI TRANSISTOR		
Q3707 or	BCR133T-X	DIGI TRANSISTOR		
Q3707 or	UN9211J-X	DIGI TRANSISTOR		
Q3707 or	PDTC114EE-X	DIGI TRANSISTOR		
Q3731	2SC4617/RS/-X	TRANSISTOR		2SC4617
Q3731 or	BC847BT-X	TRANSISTOR		
Q3731 or	2SD2216J/RS/-X	TRANSISTOR		
Q3733	BC847PN-X	PAIR TRANSISTOR		BC847PN-X
Q3734	2SC4617/RS/-X	TRANSISTOR		2SC4617
Q3734 or	BC847BT-X	TRANSISTOR		
Q3734 or	2SD2216J/RS/-X	TRANSISTOR		
Q3735	BC847PN-X	PAIR TRANSISTOR		
Q4951	BCR133F-X	DIGI TRANSISTOR		
Q4951 or	DTC114EM-X	DIGI TRANSISTOR		
Q6101	QS6U24-W	MOS FET		
Q6103	SSM3J14T-X	MOS FET		
Q6201	QS6U24-W	MOS FET		
Q6301	QS6U24-W	MOS FET		
Q6401	QS6U24-W	MOS FET		
Q6501	SSM3J14T-X	MOS FET		
Q6502	BC856S-X	PAIR TRANSISTOR		
Q6502 or	PUMT1-W	PAIR TRANSISTOR		
Q6502 or	UMT1N-W	PAIR TRANSISTOR		
Q6502 or	XP4401-W	TRANSISTOR		
Q6503	2SC4617/RS/-X	TRANSISTOR		
Q6503 or	BC847BT-X	TRANSISTOR		
Q6503 or	2SD2216J/RS/-X	TRANSISTOR		
Q6701	SSM3J14T-X	MOS FET		
Q6702	RTF020P02-X	MOS FET		
Q6703	RTF020P02-X	MOS FET		
Q6704	2SA1577/RS/-X	TRANSISTOR		
Q6705	DTC124TE-X	DIGI TRANSISTOR		
Q7701	PUMX1-W	PAIR TRANSISTOR		
Q7701 or	BC847S-X	PAIR TRANSISTOR		
Q7701 or	UMX1N-W	PAIR TRANSISTOR		
Q7702	PUMX1-W	PAIR TRANSISTOR		
Q7702 or	BC847S-X	PAIR TRANSISTOR		
Q7702 or	UMX1N-W	PAIR TRANSISTOR		
Q7703	PUMX1-W	PAIR TRANSISTOR		
Q7703 or	BC847S-X	PAIR TRANSISTOR		
Q7703 or	UMX1N-W	PAIR TRANSISTOR		
Q7704	PUMX1-W	PAIR TRANSISTOR		
Q7704 or	BC847S-X	PAIR TRANSISTOR		
Q7704 or	UMX1N-W	PAIR TRANSISTOR		
Q7705	PUMX1-W	PAIR TRANSISTOR		
Q7705 or	BC847S-X	PAIR TRANSISTOR		
Q7705 or	UMX1N-W	PAIR TRANSISTOR		
Q7706	XP4311-W	TRANSISTOR		
Q7706 or	UMD3N-W	DIGI TRANSISTOR		

MODEL	MARK	MODEL	MARK	MODEL	MARK
GR-D270EK	A	GR-D270EZ	D	GR-D290EY	G
GR-D270EX	B	GR-D290EK	E	GR-D290EZ	H
GR-D270EY	C	GR-D290EX	F		

⚠ Symbol No.	Part No.	Part Name	Description	Local
Q8002	DTA114EE-X	DIGI TRANSISTOR	DTA114EE-X	A,B,C,D
Q8002 or	BCR183T-X	DIGI TRANSISTOR	DTA114EE-X	A,B,C,D
Q8002 or	UN9111J-X	DIGI TRANSISTOR	DTA114EE-X	A,B,C,D
Q8002 or	PDTA114EE-X	DIGI TRANSISTOR	DTA114EE-X	A,B,C,D
Q8601	EMD2-W	PAIR TRANSISTOR	VBUS SW	
D101	EMZ6.8N-X	Z DIODE	(BATT/DC)	
D102	MA8068-X	Z DIODE	(BATT/DC)	
D1001	DA221-X	DIODE ARRAY		
D1001 or	MA133-X	SI DIODE		
D1002	1SS376-X	SI DIODE		
D3001	RB551V-30-X	SB DIODE	PHY VDD	
D3002	EC2C01C-TR-X	VARI CAP DIODE	FS VCO	
D3003	EC2C01C-TR-X	VARI CAP DIODE	FS VCO	
D3004	EC2C01C-TR-X	VARI CAP DIODE	MAIN VCO	
D3005	DAN222-X	SI DIODE		
D3005 or	MA132WK-X	SI DIODE		
D5501	1SS355-X	SI DIODE		
D5501 or	MA111-X	SI DIODE		
D6001	RB715W-X	SB DIODE		
D6501	RB480Y-W	SB DIODE		
D6502	RB480Y-W	SB DIODE		
D6701	RSX101VA-30-X	SB DIODE		
D6703	RSX101VA-30-X	SB DIODE		
D6801	RB551V-30-X	SB DIODE		
C101	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C103	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C1001	NDCA1HJ-7R0W	C CAPACITOR	7pF 50V J	
C1002	NDCA1HJ-7R0W	C CAPACITOR	7pF 50V J	
C1003	NDCA1HJ-100W	C CAPACITOR	10pF 50V J	
C1004	NBE20JM-226X	TA E CAPACITOR	22uF 6.3V M	
C1005	NCFA1AZ-104W	C CAPACITOR	0.1uF 10V Z	
C1006	NCFA1AZ-104W	C CAPACITOR	0.1uF 10V Z	
C1007	NCJA0JK-105W-A	C CAPACITOR	1uF 6.3V K	
C1008	NBE20JM-226X	TA E CAPACITOR	22uF 6.3V M	
C1009	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C1013	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C1014	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C1018	NCF31AZ-105X	C CAPACITOR	1uF 10V Z	
C1023	NCBA1EK-682W	C CAPACITOR	6800pF 25V K	
C1024	NCBA1EK-682W	C CAPACITOR	6800pF 25V K	
C1025	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C1029	NCFA1AZ-104W	C CAPACITOR	0.1uF 10V Z	
C1031	NCFA1AZ-104W	C CAPACITOR	0.1uF 10V Z	
C1032	NCFA1AZ-104W	C CAPACITOR	0.1uF 10V Z	
C1033	NCFA1AZ-104W	C CAPACITOR	0.1uF 10V Z	
C1034	NCFA1AZ-104W	C CAPACITOR	0.1uF 10V Z	
C1035	NCFA1AZ-104W	C CAPACITOR	0.1uF 10V Z	
C1036	NCFA1AZ-104W	C CAPACITOR	0.1uF 10V Z	
C1038	NCFA1AZ-104W	C CAPACITOR	0.1uF 10V Z	
C1039	NCFA1AZ-104W	C CAPACITOR	0.1uF 10V Z	
C1040	NCFA1AZ-104W	C CAPACITOR	0.1uF 10V Z	
C1041	NCFA1AZ-104W	C CAPACITOR	0.1uF 10V Z	
C1042	NCFA1AZ-104W	C CAPACITOR	0.1uF 10V Z	
C1044	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C1045	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C1046	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C1051	NCB31CK-223X	C CAPACITOR	0.022uF 16V K	
C1052	NCB31CK-223X	C CAPACITOR	0.022uF 16V K	
C1053	NCB31CK-223X	C CAPACITOR	0.022uF 16V K	
C1054	NCB31CK-223X	C CAPACITOR	0.022uF 16V K	
C1055	NCF31AZ-105X	C CAPACITOR	1uF 10V Z	
C2201	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C2202	NCB30JK-105X	C CAPACITOR	1uF 6.3V K	
C2203	NCB30JK-105X	C CAPACITOR	1uF 6.3V K	
C2204	NCB30JK-105X	C CAPACITOR	1uF 6.3V K	
C2205	NCB30JK-105X	C CAPACITOR	1uF 6.3V K	
C2209	NCB30JK-105X	C CAPACITOR	1uF 6.3V K	
C2210	NCB30JK-105X	C CAPACITOR	1uF 6.3V K	
C2213	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C2214	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C2217	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C2218	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C2223	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C2224	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C2401	NBZ0015-106X	TA E CAPACITOR	10uF 6.3V M	
C2402	NBZ0015-106X	TA E CAPACITOR	10uF 6.3V M	

⚠ Symbol No.	Part No.	Part Name	Description	Local
C2403	NBZ0015-106X	TA E CAPACITOR	10uF 6.3V M	
C2404	NBZ0015-106X	TA E CAPACITOR	10uF 6.3V M	
C2405	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C2406	NBZ0015-106X	TA E CAPACITOR	10uF 6.3V M	
C2603	NCBA1CK-223W	C CAPACITOR	0.022uF 16V K	
C2604	NCBA1CK-223W	C CAPACITOR	0.022uF 16V K	
C2605	NCBA1EK-472W	C CAPACITOR	4700pF 25V K	
C2606	NCBA1EK-472W	C CAPACITOR	4700pF 25V K	
C2609	NCBA1HK-332W	C CAPACITOR	3300pF 50V K	
C2610	NCBA1HK-332W	C CAPACITOR	3300pF 50V K	
C2611	NCB30JK-105X	C CAPACITOR	1uF 6.3V K	
C2612	NCB30JK-105X	C CAPACITOR	1uF 6.3V K	
C2613	NCB30JK-105X	C CAPACITOR	1uF 6.3V K	
C2623	NDCA1HJ-100W	C CAPACITOR	10pF 50V J	
C2624	NDCA1HJ-100W	C CAPACITOR	10pF 50V J	
C2655	NCBA1CK-473W	C CAPACITOR	0.047uF 16V K	
C2656	NCBA1CK-473W	C CAPACITOR	0.047uF 16V K	
C3001	NBE20JM-106X	TA E CAPACITOR	10uF 6.3V M	
C3002	NCB30JK-105X	C CAPACITOR	1uF 6.3V K	
C3003	NBE20JM-106X	TA E CAPACITOR	10uF 6.3V M	
C3004	NCB30JK-105X	C CAPACITOR	1uF 6.3V K	
C3005	NBE20JM-106X	TA E CAPACITOR	10uF 6.3V M	
C3006	NCB30JK-105X	C CAPACITOR	1uF 6.3V K	
C3007	NBE20JM-106X	TA E CAPACITOR	10uF 6.3V M	
C3008	NCB30JK-105X	C CAPACITOR	1uF 6.3V K	
C3009	NBE20JM-106X	TA E CAPACITOR	10uF 6.3V M	
C3010	NCB30JK-105X	C CAPACITOR	1uF 6.3V K	
C3011	NBE20JM-106X	TA E CAPACITOR	10uF 6.3V M	
C3013	NBE20JM-106X	TA E CAPACITOR	10uF 6.3V M	
C3014	NCB30JK-105X	C CAPACITOR	1uF 6.3V K	
C3016	NCB30JK-105X	C CAPACITOR	1uF 6.3V K	
C3017	NCB30JK-105X	C CAPACITOR	1uF 6.3V K	
C3018	NCB30JK-105X	C CAPACITOR	1uF 6.3V K	
C3019	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C3020	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C3021	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C3022	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C3023	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C3024	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C3025	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C3026	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C3027	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
C3029	NCBA1HK-102W	C CAPACITOR	1000pF 50V K	
C3030	NDCA1HJ-330W	C CAPACITOR	33pF 50V J	
C3031	NCBA1HK-102W	C CAPACITOR	1000pF 50V K	
C3032	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C3033	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C3034	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C3035	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C3036	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C3037	NCB31AK-334X	C CAPACITOR	0.33uF 10V K	
C3039	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C3040	NDCA1EJ-221W	C CAPACITOR	220pF 25V J	
C3046	NCB31CK-224X	C CAPACITOR	0.22uF 16V K	
C3048	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C3049	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C3050	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C3051	NDCA1HJ-470W	C CAPACITOR	47pF 50V J	
C3052	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C3053	NCBA1HK-102W	C CAPACITOR	1000pF 50V K	
C3054	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C3055	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C3056	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C3057	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C3058	NCBA1EK-472W	C CAPACITOR	4700pF 25V K	
C3059	NCB30JK-105X	C CAPACITOR	1uF 6.3V K	
C3060	NDCA1EJ-271W	C CAPACITOR	270pF 25V J	
C3061	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C3062	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C3063	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C3064	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C3065	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C3066	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C3067	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C3068	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C3069	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C3070	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C3071	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	

MODEL	MARK	MODEL	MARK	MODEL	MARK
GR-D270EK	A	GR-D270EZ	D	GR-D290EY	G
GR-D270EX	B	GR-D290EK	E	GR-D290EZ	H
GR-D270EY	C	GR-D290EX	F		

⚠ Symbol No.	Part No.	Part Name	Description	Local
C3072	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C3073	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C3201	NBZ0015-106X	TA E CAPACITOR	10uF 6.3V M	
C3202	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C3203	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C3204	NBZ0015-106X	TA E CAPACITOR	10uF 6.3V M	
C3205	NBE20GM-476X	TA E CAPACITOR	47uF 4V M	
C3206	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C3207	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C3209	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C3211	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C3214	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C3216	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C3217	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C3219	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C3220	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C3221	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C3222	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C3223	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C3224	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C3225	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C3229	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C3233	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C3234	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C3701	NCB10JK-106X	C CAPACITOR	10uF 6.3V K	
C3706	NCB30JK-105X	C CAPACITOR	1uF 6.3V K	
C3708	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C3709	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C3710	NBE20GM-226X	TA E CAPACITOR	22uF 4V M	
C3711	NBE20GM-226X	TA E CAPACITOR	22uF 4V M	
C3712	NBE20GM-107X	TA E CAPACITOR	100uF 4V M	
C3713	NBE20GM-107X	TA E CAPACITOR	100uF 4V M	
C3714	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C3715	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C3731	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C3732	NCBA1HK-102W	C CAPACITOR	1000pF 50V K	
C3733	NDCA1HJ-3R0W	C CAPACITOR	3pF 50V J	
C3734	NDCA1HJ-5R0W	C CAPACITOR	5pF 50V J	
C3735	NDCA1HJ-330W	C CAPACITOR	33pF 50V J	
C3736	NCBA1HK-102W	C CAPACITOR	1000pF 50V K	
C3738	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C3739	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C3740	NCB30JK-105X	C CAPACITOR	1uF 6.3V K	
C3741	NCB30JK-105X	C CAPACITOR	1uF 6.3V K	
C3742	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C3743	NDCA1HJ-3R0W	C CAPACITOR	3pF 50V J	
C3744	NDCA1HJ-5R0W	C CAPACITOR	5pF 50V J	
C3745	NDCA1HJ-330W	C CAPACITOR	33pF 50V J	
C3746	NCB20JM-475X	C CAPACITOR	4.7uF 6.3V M	
C3747	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C4201	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C4202	NCB30JK-105X	C CAPACITOR	1uF 6.3V K	
C4203	NBE20JM-226X	TA E CAPACITOR	22uF 6.3V M	
C4204	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C4205	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C4206	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C4207	NCB30JK-105X	C CAPACITOR	1uF 6.3V K	
C4208	NCB31CK-105X	C CAPACITOR	1uF 16V K	
C4209	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C4210	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C4211	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C4212	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C4213	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C4214	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C4215	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C4902	NBZ0015-106X	TA E CAPACITOR	10uF 6.3V M	
C4904	NBZ0015-106X	TA E CAPACITOR	10uF 6.3V M	
C4905	NCFA1AZ-104W	C CAPACITOR	0.1uF 10V Z	
C4906	NCFA1AZ-104W	C CAPACITOR	0.1uF 10V Z	
C4907	NCFA1AZ-104W	C CAPACITOR	0.1uF 10V Z	
C4908	NCFA1AZ-104W	C CAPACITOR	0.1uF 10V Z	
C4909	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C4912	NCFA1AZ-104W	C CAPACITOR	0.1uF 10V Z	
C4913	NCFA1AZ-104W	C CAPACITOR	0.1uF 10V Z	
C4914	NDCA1HJ-680W	C CAPACITOR	68pF 50V J	
C4915	NDCA1HJ-121W	C CAPACITOR	120pF 50V J	
C4916	NCFA1AZ-104W	C CAPACITOR	0.1uF 10V Z	
C4917	NCFA1AZ-104W	C CAPACITOR	0.1uF 10V Z	
C4918	NCFA1AZ-104W	C CAPACITOR	0.1uF 10V Z	
C4921	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C4922	NCFA1AZ-104W	C CAPACITOR	0.1uF 10V Z	
C4952	NBE21AM-106X	TA E CAPACITOR	10uF 10V M	
C4954	NBE21AM-106X	TA E CAPACITOR	10uF 10V M	
C4956	NBZ0015-106X	TA E CAPACITOR	10uF 6.3V M	
C4957	NDCA1HJ-220W	C CAPACITOR	22pF 50V J	
C4958	NDCA1HJ-220W	C CAPACITOR	22pF 50V J	
C5501	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C5502	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C5503	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C5504	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C5505	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C5506	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C5507	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C5508	NBP21VM-105X	TA E CAPACITOR	1uF 35V M	
C5509	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C5510	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C5511	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C5512	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C5513	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C5514	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C5515	NBE20GM-476X	TA E CAPACITOR	47uF 4V M	
C5516	NBP41EM-475X-B	TA E CAPACITOR	4.7uF 25V M	
C5517	NBP21CM-106X	TA E CAPACITOR	10uF 16V M	
C6005	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C6006	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C6007	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C6008	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C6009	NCB31AK-224X	C CAPACITOR	0.22uF 10V K	
C6010	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C6011	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C6101	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C6102	NCB10JK-106X	C CAPACITOR	10uF 6.3V K	
C6103	NCBA1HK-221W	C CAPACITOR	220pF 50V K	
C6104	NCBA1HK-681W	C CAPACITOR	680pF 50V K	
C6105	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C6106	NCB30JK-105X	C CAPACITOR	1uF 6.3V K	
C6107	NCBA1CK-223W	C CAPACITOR	0.022uF 16V K	
C6201	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C6202	NCB10JK-106X	C CAPACITOR	10uF 6.3V K	
C6203	NCBA1HK-102W	C CAPACITOR	1000pF 50V K	
C6204	NCBA1HK-221W	C CAPACITOR	220pF 50V K	
C6301	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C6302	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C6303	NCBA1AK-683W	C CAPACITOR	0.068uF 10V K	
C6305	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C6401	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C6402	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C6403	NCB30JK-105X	C CAPACITOR	1uF 6.3V K	
C6405	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C6501	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C6502	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C6503	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C6505	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C6506	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C6508	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C6509	NCBA1AK-333W	C CAPACITOR	0.033uF 10V K	
C6510	NCBA1AK-473W	C CAPACITOR	0.047uF 10V K	
C6511	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C6512	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C6701	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C6702	NCB41CK-106X	C CAPACITOR	10uF 16V K	
C6704	NCBA1EK-472W	C CAPACITOR	4700pF 25V K	
C6705	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C6706	NCBA1HK-221W	C CAPACITOR	220pF 50V K	
C6707	NCBA1HK-821W	C CAPACITOR	820pF 50V K	
C6802	NCB10JK-106X	C CAPACITOR	10uF 6.3V K	
C6803	NCBA1HK-102W	C CAPACITOR	1000pF 50V K	
C6804	NCBA1HK-392W	C CAPACITOR	3900pF 50V K	
C7704	NCB31CK-105X	C CAPACITOR	1uF 16V K	
C7705	NCB31CK-105X	C CAPACITOR	1uF 16V K	
C7706	NBE20JM-106X	TA E CAPACITOR	10uF 6.3V M	
C7707	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C7708	NCB11CK-475X	C CAPACITOR	4.7uF 16V K	
C7709	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C7710	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C7711	NCB20JK-475X	C CAPACITOR	4.7uF 6.3V K	

MODEL	MARK	MODEL	MARK	MODEL	MARK
GR-D270EK	A	GR-D270EZ	D	GR-D290EY	G
GR-D270EX	B	GR-D290EK	E	GR-D290EZ	H
GR-D270EY	C	GR-D290EX	F		

⚠ Symbol No.	Part No.	Part Name	Description	Local
C7712	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C7713	NCB20JK-475X	C CAPACITOR	4.7uF 6.3V K	
C7714	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C7715	NCB20JK-475X	C CAPACITOR	4.7uF 6.3V K	
C7716	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C7718	NCB31CK-105X	C CAPACITOR	1uF 16V K	
C7719	NCB31CK-105X	C CAPACITOR	1uF 16V K	
C7720	NCB11CK-475X	C CAPACITOR	4.7uF 16V K	
C7721	NCB11CK-475X	C CAPACITOR	4.7uF 16V K	
C7801	NBE90JM-106X	TA E CAPACITOR	10uF 6.3V M	
C7802	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C7803	NBE20JM-106X	TA E CAPACITOR	10uF 6.3V M	
C7804	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C7805	NCB30JK-105X	C CAPACITOR	1uF 6.3V K	
C7806	NCB30JK-105X	C CAPACITOR	1uF 6.3V K	
C7807	NCB30JK-105X	C CAPACITOR	1uF 6.3V K	
C7812	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C7813	NCB21AK-225X	C CAPACITOR	2.2uF 10V K	
C7814	NCB21AK-225X	C CAPACITOR	2.2uF 10V K	
C7815	NCB21AK-225X	C CAPACITOR	2.2uF 10V K	
C7816	NCB30JK-225X	C CAPACITOR	2.2uF 6.3V K	
C7817	NCBA1HK-152W	C CAPACITOR	1500pF 50V K	
C8001	NBZ0015-106X	TA E CAPACITOR	10uF 6.3V M	
C8002	NBZ0015-106X	TA E CAPACITOR	10uF 6.3V M	
C8003	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C8004	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C8005	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C8006	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C8007	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C8008	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C8009	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C8010	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C8011	NBZ0015-106X	TA E CAPACITOR	10uF 6.3V M	
C8012	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C8013	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C8018	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C8021	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C8022	NBZ0015-106X	TA E CAPACITOR	10uF 6.3V M	
C8023	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C8024	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C8025	NBE20JM-106X	TA E CAPACITOR	10uF 6.3V M	
C8026	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C8027	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C8028	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C8029	NCB30JK-225X	C CAPACITOR	2.2uF 6.3V K	
C8030	NBE20JM-106X	TA E CAPACITOR	10uF 6.3V M	A,B,C,D
C8032	NCB30JK-225X	C CAPACITOR	2.2uF 6.3V K	A,B,C,D
C8032	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	E,F,G,H
C8601	NBZ0015-106X	TA E CAPACITOR	10uF 6.3V M	E,F,G,H
C8602	NBZ0015-106X	TA E CAPACITOR	10uF 6.3V M	E,F,G,H
C8603	NBZ0015-106X	TA E CAPACITOR	10uF 6.3V M	E,F,G,H
C8606	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	E,F,G,H
C8607	NCJA0JK-105W-A	C CAPACITOR	1uF 6.3V K	E,F,G,H
C8608	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	E,F,G,H
C8609	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	E,F,G,H
C8610	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	E,F,G,H
C8611	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	E,F,G,H
C8612	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	E,F,G,H
C8613	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	E,F,G,H
C8614	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	E,F,G,H
C8615	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	E,F,G,H
C8616	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	E,F,G,H
C8617	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C8618	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J	E,F,G,H
C8619	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	E,F,G,H
C8620	NCJA0JK-105W-A	C CAPACITOR	1uF 6.3V K	E,F,G,H
C8621	NDCA1HJ-7R0W	C CAPACITOR	7pF 50V J	E,F,G,H
C8622	NDCA1HJ-7R0W	C CAPACITOR	7pF 50V J	E,F,G,H
C8623	NCJA0JK-105W-A	C CAPACITOR	1uF 6.3V K	E,F,G,H
C8624	NCJA0JK-105W-A	C CAPACITOR	1uF 6.3V K	
C8626	NCB30JK-105X	C CAPACITOR	1uF 6.3V K	
C8627	NBZ0015-106X	TA E CAPACITOR	10uF 6.3V M	E,F,G,H
R101	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
R1001	NRSA6AJ-105W	MG RESISTOR	1MΩ 1/16W J	
R1002	NRSA6AJ-470W	MG RESISTOR	47Ω 1/16W J	
R1003	NRSA6AJ-104W	MG RESISTOR	100kΩ 1/16W J	
R1004	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	

⚠ Symbol No.	Part No.	Part Name	Description	Local
R1007	NRSA6AJ-104W	MG RESISTOR	100kΩ 1/16W J	
R1008	NRSA6AJ-222W	MG RESISTOR	2.2kΩ 1/16W J	
R1010	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J	
R1012	NRSA6AJ-823W	MG RESISTOR	82kΩ 1/16W J	
R1013	NRSA6AJ-623W	MG RESISTOR	62kΩ 1/16W J	
R1014	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J	
R1015	NRSA6AJ-104W	MG RESISTOR	100kΩ 1/16W J	
R1016	NRSA6AJ-104W	MG RESISTOR	100kΩ 1/16W J	
R1017	NRSA6AJ-105W	MG RESISTOR	1MΩ 1/16W J	
R1018	NRSA6AJ-104W	MG RESISTOR	100kΩ 1/16W J	
R1019	NRSA6AJ-104W	MG RESISTOR	100kΩ 1/16W J	
R1020	NRSA6AJ-753W	MG RESISTOR	75kΩ 1/16W J	
R1021	NRSA6AJ-334W	MG RESISTOR	330kΩ 1/16W J	
R1022	NRSA6AJ-332W	MG RESISTOR	3.3kΩ 1/16W J	
R1023	NRSA6AJ-332W	MG RESISTOR	3.3kΩ 1/16W J	
R1024	NRSA6AJ-332W	MG RESISTOR	3.3kΩ 1/16W J	
R1025	NRSA6AJ-473W	MG RESISTOR	47kΩ 1/16W J	
R1026	NRSA6AJ-473W	MG RESISTOR	47kΩ 1/16W J	
R1029	NRSA6AJ-152W	MG RESISTOR	1.5kΩ 1/16W J	
R1030	NRSA6AJ-273W	MG RESISTOR	27kΩ 1/16W J	
R1031	NRSA6AJ-104W	MG RESISTOR	100kΩ 1/16W J	
R1032	NRSA6AJ-104W	MG RESISTOR	100kΩ 1/16W J	
R1033	NRSA6AJ-104W	MG RESISTOR	100kΩ 1/16W J	
R1034	NRSA6AJ-104W	MG RESISTOR	100kΩ 1/16W J	
R1035	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J	
R1036	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J	
R1041	NRSA6AJ-561W	MG RESISTOR	560Ω 1/16W J	
R1043	NRSA6AJ-472W	MG RESISTOR	4.7kΩ 1/16W J	
R1044	NRSA6AJ-473W	MG RESISTOR	47kΩ 1/16W J	
R1045	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J	
R1046	NRSA6AJ-153W	MG RESISTOR	15kΩ 1/16W J	
R1047	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J	
R1048	NRSA6AJ-104W	MG RESISTOR	100kΩ 1/16W J	
R1049	NRSA6AJ-104W	MG RESISTOR	100kΩ 1/16W J	
R1050	NRSA6AJ-104W	MG RESISTOR	100kΩ 1/16W J	
R1051	NRSA6AJ-472W	MG RESISTOR	4.7kΩ 1/16W J	
R1052	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J	
R1053	NRSA6AJ-154W	MG RESISTOR	150kΩ 1/16W J	
R1054	NRSA6AJ-272W	MG RESISTOR	2.7kΩ 1/16W J	
R1055	NRSA6AJ-183W	MG RESISTOR	18kΩ 1/16W J	
R1056	NRSA6AJ-473W	MG RESISTOR	47kΩ 1/16W J	
R1057	NRSA6AJ-822W	MG RESISTOR	8.2kΩ 1/16W J	
R1059	NRSA6AJ-123W	MG RESISTOR	12kΩ 1/16W J	
R1060	NRSA6AJ-473W	MG RESISTOR	47kΩ 1/16W J	
R1061	NRSA6AJ-393W	MG RESISTOR	39kΩ 1/16W J	
R1063	NRSA6AJ-223W	MG RESISTOR	22kΩ 1/16W J	
R1064	NRSA6AJ-104W	MG RESISTOR	100kΩ 1/16W J	
R1066	NRSA6AJ-104W	MG RESISTOR	100kΩ 1/16W J	
R1067	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J	
R1068	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J	
R1069	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J	
R1070	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J	
R1071	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J	
R1072	NRSA6AJ-332W	MG RESISTOR	3.3kΩ 1/16W J	
R1073	NRSA6AJ-332W	MG RESISTOR	3.3kΩ 1/16W J	
R1074	NRSA6AJ-332W	MG RESISTOR	3.3kΩ 1/16W J	
R1075	NRSA6AJ-332W	MG RESISTOR	3.3kΩ 1/16W J	
R1076	NRSA6AJ-104W	MG RESISTOR	100kΩ 1/16W J	
R1077	NRSA6AJ-104W	MG RESISTOR	100kΩ 1/16W J	
R1078	NRSA6AJ-104W	MG RESISTOR	100kΩ 1/16W J	
R1080	NRSA6AJ-104W	MG RESISTOR	100kΩ 1/16W J	
R1081	NRSA6AJ-473W	MG RESISTOR	47kΩ 1/16W J	
R1082	NRSA6AJ-473W	MG RESISTOR	47kΩ 1/16W J	
R1083	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J	
R1085	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J	
R1086	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J	
R1089	NRSA6AJ-104W	MG RESISTOR	100kΩ 1/16W J	
R1090	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J	
R1091	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J	
R1092	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J	
R1093	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J	
R1094	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J	
R1095	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J	
R1096	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J	
R1097	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J	
R1098	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J	
R1099	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J	
R1100	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J	

MODEL	MARK	MODEL	MARK	MODEL	MARK
GR-D270EK	A	GR-D270EZ	D	GR-D290EY	G
GR-D270EX	B	GR-D290EK	E	GR-D290EZ	H
GR-D270EY	C	GR-D290EX	F		

⚠ Symbol No.	Part No.	Part Name	Description	Local
R1103	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J	
R1104	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J	
R1105	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J	
R1106	NRSA6AJ-104W	MG RESISTOR	100kΩ 1/16W J	
R1110	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J	
R1112	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J	
R1117	NRSA6AJ-330W	MG RESISTOR	33Ω 1/16W J	
R1118	NRSA6AJ-104W	MG RESISTOR	100kΩ 1/16W J	
R1119	NRSA6AJ-104W	MG RESISTOR	100kΩ 1/16W J	
R1120	NRSA6AJ-104W	MG RESISTOR	100kΩ 1/16W J	
R1121	NRSA6AJ-104W	MG RESISTOR	100kΩ 1/16W J	
R1122	NRSA6AJ-104W	MG RESISTOR	100kΩ 1/16W J	
R1123	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
R1124	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
R1125	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
R1126	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
R1127	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
R1128	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
R1132	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J	
R1146	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J	
R1147	NRSA6AJ-334W	MG RESISTOR	330kΩ 1/16W J	
R1148	NRSA6AJ-224W	MG RESISTOR	220kΩ 1/16W J	
R2201	NRSA6AJ-224W	MG RESISTOR	220kΩ 1/16W J	
R2202	NRSA6AJ-564W	MG RESISTOR	560kΩ 1/16W J	
R2203	NRSA6AJ-393W	MG RESISTOR	39kΩ 1/16W J	
R2204	NRSA6AJ-154W	MG RESISTOR	150kΩ 1/16W J	
R2206	NRSA6AJ-333W	MG RESISTOR	33kΩ 1/16W J	
R2207	NRSA6AJ-333W	MG RESISTOR	33kΩ 1/16W J	
R2208	NRSA6AJ-223W	MG RESISTOR	22kΩ 1/16W J	
R2209	NRSA6AJ-223W	MG RESISTOR	22kΩ 1/16W J	
R2210	NRSA6AJ-821W	MG RESISTOR	820Ω 1/16W J	
R2211	NRSA6AJ-821W	MG RESISTOR	820Ω 1/16W J	
R2212	NRSA6AJ-2R7W	MG RESISTOR	2.7Ω 1/16W J	
R2213	NRSA6AJ-2R7W	MG RESISTOR	2.7Ω 1/16W J	
R2217	NRSA6AJ-100W	MG RESISTOR	10Ω 1/16W J	
R2231	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J	
R2233	NRSA6AJ-564W	MG RESISTOR	560kΩ 1/16W J	
R2234	NRSA6AJ-564W	MG RESISTOR	560kΩ 1/16W J	
R2235	NRSA6AJ-332W	MG RESISTOR	3.3kΩ 1/16W J	
R2401	NRSA6AJ-472W	MG RESISTOR	4.7kΩ 1/16W J	
R2402	NRSA6AJ-472W	MG RESISTOR	4.7kΩ 1/16W J	
R2403	NRSA6AJ-183W	MG RESISTOR	18kΩ 1/16W J	
R2407	NRSA6AJ-100W	MG RESISTOR	10Ω 1/16W J	
R2601	NRSA6AJ-222W	MG RESISTOR	2.2kΩ 1/16W J	
R2602	NRSA6AJ-222W	MG RESISTOR	2.2kΩ 1/16W J	
R2607	NRSA6AJ-222W	MG RESISTOR	2.2kΩ 1/16W J	
R2608	NRSA6AJ-222W	MG RESISTOR	2.2kΩ 1/16W J	
R2609	NRSA6AJ-223W	MG RESISTOR	22kΩ 1/16W J	
R2610	NRSA6AJ-223W	MG RESISTOR	22kΩ 1/16W J	
R2618	NRSA6AJ-682W	MG RESISTOR	6.8kΩ 1/16W J	
R2619	NRSA6AJ-682W	MG RESISTOR	6.8kΩ 1/16W J	
R3001	NRSA6AJ-222W	MG RESISTOR	2.2kΩ 1/16W J	
R3002	NRSA6AJ-222W	MG RESISTOR	2.2kΩ 1/16W J	
R3004	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J	
R3005	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J	
R3006	NRSA6AJ-222W	MG RESISTOR	2.2kΩ 1/16W J	
R3008	NRSA6AJ-224W	MG RESISTOR	220kΩ 1/16W J	
R3009	NRSA6AJ-224W	MG RESISTOR	220kΩ 1/16W J	
R3010	NRSA6AJ-822W	MG RESISTOR	8.2kΩ 1/16W J	
R3011	NRSA6AJ-332W	MG RESISTOR	3.3kΩ 1/16W J	
R3012	NRSA6AJ-821W	MG RESISTOR	820Ω 1/16W J	
R3013	NRSA6AJ-332W	MG RESISTOR	3.3kΩ 1/16W J	
R3014	NRSA6AJ-821W	MG RESISTOR	820Ω 1/16W J	
R3020	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	E,F,G,H
R3021	NRSA6AJ-822W	MG RESISTOR	8.2kΩ 1/16W J	
R3022	NRSA6AJ-822W	MG RESISTOR	8.2kΩ 1/16W J	
R3025	NRSA6AJ-121W	MG RESISTOR	120Ω 1/16W J	
R3026	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J	
R3028	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
R3029	NRSA6AJ-224W	MG RESISTOR	220kΩ 1/16W J	
R3030	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J	
R3031	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J	
R3032	NRSA6AJ-392W	MG RESISTOR	3.9kΩ 1/16W J	
R3033	NRSA6AJ-392W	MG RESISTOR	3.9kΩ 1/16W J	
R3034	NRSA6AD-560W	MG RESISTOR	56Ω 1/16W D	
R3035	NRSA6AD-560W	MG RESISTOR	56Ω 1/16W D	
R3036	NRSA6AD-560W	MG RESISTOR	56Ω 1/16W D	
R3037	NRSA6AD-560W	MG RESISTOR	56Ω 1/16W D	
R3038	NRSA6AD-512W	MG RESISTOR	5.1kΩ 1/16W D	
R3040	NRSA6AJ-242W	MG RESISTOR	2.4kΩ 1/16W J	
R3043	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
R3045	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
R3051	NRSA6AJ-101W	MG RESISTOR	100Ω 1/16W J	
R3054	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
R3055	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
R3056	NRSA6AJ-683W	MG RESISTOR	68kΩ 1/16W J	
R3057	NRSA6AJ-683W	MG RESISTOR	68kΩ 1/16W J	
R3058	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
R3059	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
R3060	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J	
R3063	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
R3064	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
R3065	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	E,F,G,H
R3066	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J	
R3067	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	E,F,G,H
R3068	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
R3069	NRSA6AJ-470W	MG RESISTOR	47Ω 1/16W J	
R3070	NRSA6AJ-470W	MG RESISTOR	47Ω 1/16W J	
R3071	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
R3072	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
R3073	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
R3074	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
R3076	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
R3078	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
R3081	NRSA6AJ-100W	MG RESISTOR	10Ω 1/16W J	
R3082	NRSA6AJ-100W	MG RESISTOR	10Ω 1/16W J	
R3083	NRSA6AJ-100W	MG RESISTOR	10Ω 1/16W J	
R3084	NRSA6AJ-100W	MG RESISTOR	10Ω 1/16W J	
R3085	NRSA6AJ-100W	MG RESISTOR	10Ω 1/16W J	
R3089	NRSA6AJ-100W	MG RESISTOR	10Ω 1/16W J	
R3090	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
R3092	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
R3093	NRSA6AJ-822W	MG RESISTOR	8.2kΩ 1/16W J	
R3094	NRSA6AJ-563W	MG RESISTOR	56kΩ 1/16W J	
R3095	NRSA6AJ-563W	MG RESISTOR	56kΩ 1/16W J	
R3201	NRSA6AJ-101W	MG RESISTOR	100Ω 1/16W J	
R3202	NRSA6AD-183W	MG RESISTOR	18kΩ 1/16W D	
R3203	NRSA6AD-123W	MG RESISTOR	12kΩ 1/16W D	
R3204	NRSA6AD-821W	MG RESISTOR	820Ω 1/16W D	
R3205	NRSA6AD-821W	MG RESISTOR	820Ω 1/16W D	
R3207	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
R3212	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
R3213	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
R3214	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
R3216	NRSA6AJ-100W	MG RESISTOR	10Ω 1/16W J	
R3217	NRSA6AJ-100W	MG RESISTOR	10Ω 1/16W J	
R3701	NRSA6AD-271W	MG RESISTOR	270Ω 1/16W D	
R3703	NRSA6AJ-332W	MG RESISTOR	3.3kΩ 1/16W J	
R3704	NRSA6AD-301W	MG RESISTOR	300Ω 1/16W D	
R3707	NRSA6AD-680W	MG RESISTOR	68Ω 1/16W D	
R3708	NRSA6AD-680W	MG RESISTOR	68Ω 1/16W D	
R3709	NRSA6AD-680W	MG RESISTOR	68Ω 1/16W D	
R3710	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
R3712	NRSA6AJ-105W	MG RESISTOR	1MΩ 1/16W J	
R3713	NRSA6AJ-104W	MG RESISTOR	100kΩ 1/16W J	
R3714	NRSA6AJ-823W	MG RESISTOR	82kΩ 1/16W J	
R3715	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J	
R3718	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
R3722	NRSA6AD-151W	MG RESISTOR	150Ω 1/16W D	
R3724	NRSA6AJ-472W	MG RESISTOR	4.7kΩ 1/16W J	
R3725	NRSA6AD-151W	MG RESISTOR	150Ω 1/16W D	
R3726	NRSA6AJ-472W	MG RESISTOR	4.7kΩ 1/16W J	
R3727	NRSA6AJ-472W	MG RESISTOR	4.7kΩ 1/16W J	
R3728	NRSA6AD-151W	MG RESISTOR	150Ω 1/16W D	
R3730	NRSA6AJ-472W	MG RESISTOR	4.7kΩ 1/16W J	
R3731	NRSA6AJ-472W	MG RESISTOR	4.7kΩ 1/16W J	
R3732	NRSA6AJ-101W	MG RESISTOR	100Ω 1/16W J	
R3733	NRSA6AD-561W	MG RESISTOR	560Ω 1/16W D	
R3734	NRSA6AJ-822W	MG RESISTOR	8.2kΩ 1/16W J	
R3735	NRSA6AD-182W	MG RESISTOR	1.8kΩ 1/16W D	
R3736	NRSA6AJ-183W	MG RESISTOR	18kΩ 1/16W J	
R3737	NRSA6AJ-183W	MG RESISTOR	18kΩ 1/16W J	
R3738	NRSA6AJ-681W	MG RESISTOR	680Ω 1/16W J	
R3739	NRSA6AJ-821W	MG RESISTOR	820Ω 1/16W J	
R3740	NRSA6AJ-821W	MG RESISTOR	820Ω 1/16W J	
R3741	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J	

MODEL	MARK	MODEL	MARK	MODEL	MARK
GR-D270EK	A	GR-D270EZ	D	GR-D290EY	G
GR-D270EX	B	GR-D290EK	E	GR-D290EZ	H
GR-D270EY	C	GR-D290EX	F		

⚠ Symbol No.	Part No.	Part Name	Description	Local
R3744	NRSA6AD-561W	MG RESISTOR	560Ω 1/16W D	
R3745	NRSA6AD-152W	MG RESISTOR	1.5kΩ 1/16W D	
R3746	NRSA6AJ-222W	MG RESISTOR	2.2kΩ 1/16W J	
R3747	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J	
R3748	NRSA6AJ-474W	MG RESISTOR	470kΩ 1/16W J	
R4201	NRSA6AJ-333W	MG RESISTOR	33kΩ 1/16W J	
R4202	NRSA6AJ-100W	MG RESISTOR	10Ω 1/16W J	
R4203	NRSA6AJ-100W	MG RESISTOR	10Ω 1/16W J	
R4204	NRSA6AJ-100W	MG RESISTOR	10Ω 1/16W J	
R4901	NRSA6AJ-243W	MG RESISTOR	24kΩ 1/16W J	
R4902	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J	
R4903	NRSA6AJ-822W	MG RESISTOR	8.2kΩ 1/16W J	
R4904	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J	
R4905	NRSA6AJ-153W	MG RESISTOR	15kΩ 1/16W J	
R4906	NRSA6AJ-684W	MG RESISTOR	680kΩ 1/16W J	
R4907	NRSA6AJ-105W	MG RESISTOR	1MΩ 1/16W J	
R4908	NRSA6AJ-472W	MG RESISTOR	4.7kΩ 1/16W J	
R4909	NRSA6AJ-105W	MG RESISTOR	1MΩ 1/16W J	
R4910	NRSA6AJ-101W	MG RESISTOR	100Ω 1/16W J	
R4911	NRSA6AJ-101W	MG RESISTOR	100Ω 1/16W J	
R4912	NRSA6AJ-101W	MG RESISTOR	100Ω 1/16W J	
R4917	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J	
R4918	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J	
R4923	NRSA6AJ-123W	MG RESISTOR	12kΩ 1/16W J	
R4924	NRSA6AJ-123W	MG RESISTOR	12kΩ 1/16W J	
R4935	NRSA6AJ-104W	MG RESISTOR	100kΩ 1/16W J	
R4944	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
R4945	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J	
R4951	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J	
R4952	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J	
R4953	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J	
R4954	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J	
R4955	NRSA6AJ-101W	MG RESISTOR	100Ω 1/16W J	
R4956	NRSA6AJ-4R7W	MG RESISTOR	4.7Ω 1/16W J	
R4957	NRSA6AJ-4R7W	MG RESISTOR	4.7Ω 1/16W J	
R4959	NRSA6AJ-4R7W	MG RESISTOR	4.7Ω 1/16W J	
R4960	NRSA6AJ-4R7W	MG RESISTOR	4.7Ω 1/16W J	
R4961	NRSA6AJ-271W	MG RESISTOR	270Ω 1/16W J	
R5501	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J	
R5502	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J	
R5503	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J	
R5504	NRSA6AJ-100W	MG RESISTOR	10Ω 1/16W J	
R5505	NRSA6AJ-100W	MG RESISTOR	10Ω 1/16W J	
R5506	NRSA6AJ-100W	MG RESISTOR	10Ω 1/16W J	
R5507	NRSA6AJ-100W	MG RESISTOR	10Ω 1/16W J	
R5508	NRSA6AJ-100W	MG RESISTOR	10Ω 1/16W J	
R5509	NRSA6AJ-100W	MG RESISTOR	10Ω 1/16W J	
R5510	NRSA6AJ-104W	MG RESISTOR	100kΩ 1/16W J	
R6001	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J	
R6005	NRSA6AD-303W	MG RESISTOR	30kΩ 1/16W D	
R6006	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
R6008	NRSA6AD-823W	MG RESISTOR	82kΩ 1/16W D	
R6009	NRSA6AD-333W	MG RESISTOR	33kΩ 1/16W D	
R6010	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J	
R6013	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
R6014	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
R6103	NRSA6AJ-822W	MG RESISTOR	8.2kΩ 1/16W J	
R6104	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
R6105	NRSA6AJ-123W	MG RESISTOR	12kΩ 1/16W J	
R6106	NRSA6AJ-104W	MG RESISTOR	100kΩ 1/16W J	
R6107	NRSA6AD-243W	MG RESISTOR	24kΩ 1/16W D	
R6108	NRSA6AD-363W	MG RESISTOR	36kΩ 1/16W D	
R6110	NRSA6AJ-332W	MG RESISTOR	3.3kΩ 1/16W J	
R6203	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
R6204	NRSA6AJ-822W	MG RESISTOR	8.2kΩ 1/16W J	
R6303	NRSA6AJ-104W	MG RESISTOR	100kΩ 1/16W J	
R6304	NRSA6AJ-123W	MG RESISTOR	12kΩ 1/16W J	
R6305	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J	
R6403	NRSA6AJ-273W	MG RESISTOR	27kΩ 1/16W J	
R6404	NRSA6AJ-473W	MG RESISTOR	47kΩ 1/16W J	
R6503	NRSA6AD-823W	MG RESISTOR	82kΩ 1/16W D	
R6504	NRSA6AD-823W	MG RESISTOR	82kΩ 1/16W D	
R6506	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J	
R6507	NRSA6AJ-333W	MG RESISTOR	33kΩ 1/16W J	
R6508	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J	
R6512	NRSA6AJ-473W	MG RESISTOR	47kΩ 1/16W J	
R6513	NRSA6AJ-272W	MG RESISTOR	2.7kΩ 1/16W J	
R6701	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
R6702	NRV142F-R20X	CMF RESISTOR	0.2Ω 1/4W F	
R6704	NRSA6AJ-105W	MG RESISTOR	1MΩ 1/16W J	
R6705	NRSA6AJ-105W	MG RESISTOR	1MΩ 1/16W J	
R6706	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J	
R6707	NRSA6AJ-152W	MG RESISTOR	1.5kΩ 1/16W J	
R6708	NRSA6AJ-153W	MG RESISTOR	15kΩ 1/16W J	
R6709	NRSA6AJ-114W	MG RESISTOR	110kΩ 1/16W J	
R6710	NRSA6AJ-124W	MG RESISTOR	120kΩ 1/16W J	
R6712	NRSA6AJ-561W	MG RESISTOR	560Ω 1/16W J	
R6713	NRSA6AJ-224W	MG RESISTOR	220kΩ 1/16W J	
R6714	NRSA6AJ-472W	MG RESISTOR	4.7kΩ 1/16W J	
R6715	NRSA6AD-472W	MG RESISTOR	4.7kΩ 1/16W D	
R6716	NRSA6AJ-822W	MG RESISTOR	8.2kΩ 1/16W J	
R6717	NRSA6AD-183W	MG RESISTOR	18kΩ 1/16W D	
R6718	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
R6719	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R6802	NRSA6AJ-472W	MG RESISTOR	4.7kΩ 1/16W J	
R6803	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J	
R7702	NRSA6AD-122W	MG RESISTOR	1.2kΩ 1/16W D	
R7703	NRSA6AD-823W	MG RESISTOR	82kΩ 1/16W D	
R7706	NRSA6AD-223W	MG RESISTOR	22kΩ 1/16W D	
R7707	NRSA6AD-822W	MG RESISTOR	8.2kΩ 1/16W D	
R7708	NRSA6AD-123W	MG RESISTOR	12kΩ 1/16W D	
R7709	NRSA6AD-222W	MG RESISTOR	2.2kΩ 1/16W D	
R7710	NRSA6AD-222W	MG RESISTOR	2.2kΩ 1/16W D	
R7711	NRSA6AJ-682W	MG RESISTOR	6.8kΩ 1/16W J	
R7712	NRSA6AJ-220W	MG RESISTOR	22Ω 1/16W J	
R7713	NRSA6AD-123W	MG RESISTOR	12kΩ 1/16W D	
R7714	NRSA6AD-222W	MG RESISTOR	2.2kΩ 1/16W D	
R7715	NRSA6AD-222W	MG RESISTOR	2.2kΩ 1/16W D	
R7716	NRSA6AJ-682W	MG RESISTOR	6.8kΩ 1/16W J	
R7717	NRSA6AJ-220W	MG RESISTOR	22Ω 1/16W J	
R7718	NRSA6AD-123W	MG RESISTOR	12kΩ 1/16W D	
R7719	NRSA6AD-222W	MG RESISTOR	2.2kΩ 1/16W D	
R7720	NRSA6AD-222W	MG RESISTOR	2.2kΩ 1/16W D	
R7721	NRSA6AJ-682W	MG RESISTOR	6.8kΩ 1/16W J	
R7722	NRSA6AJ-220W	MG RESISTOR	22Ω 1/16W J	
R7723	NRSA6AD-103W	MG RESISTOR	10kΩ 1/16W D	
R7724	NRSA6AD-103W	MG RESISTOR	10kΩ 1/16W D	
R7725	NRSA6AD-103W	MG RESISTOR	10kΩ 1/16W D	
R7726	NRSA6AD-103W	MG RESISTOR	10kΩ 1/16W D	
R7727	NRSA6AD-103W	MG RESISTOR	10kΩ 1/16W D	
R7728	NRSA6AD-103W	MG RESISTOR	10kΩ 1/16W D	
R7729	NRSA6AJ-124W	MG RESISTOR	120kΩ 1/16W J	
R7730	NRSA6AJ-124W	MG RESISTOR	120kΩ 1/16W J	
R7731	NRSA6AJ-124W	MG RESISTOR	120kΩ 1/16W J	
R7732	NRSA6AD-472W	MG RESISTOR	4.7kΩ 1/16W D	
R7733	NRSA6AD-203W	MG RESISTOR	20kΩ 1/16W D	
R7736	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
R7803	NRSA6AD-622W	MG RESISTOR	6.2kΩ 1/16W D	
R7804	NRSA6AD-153W	MG RESISTOR	15kΩ 1/16W D	
R7805	NRSA6AJ-101W	MG RESISTOR	100Ω 1/16W J	
R7806	NRSA6AJ-101W	MG RESISTOR	100Ω 1/16W J	
R8002	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J	
R8008	NRSA6AJ-561W	MG RESISTOR	560Ω 1/16W J	
R8009	NRSA6AJ-105W	MG RESISTOR	1MΩ 1/16W J	
R8011	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
R8012	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
R8015	NRSA6AJ-473W	MG RESISTOR	47kΩ 1/16W J	
R8016	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J	
R8017	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J	
R8019	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
R8021	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
R8022	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
R8023	NRSA6AJ-472W	MG RESISTOR	4.7kΩ 1/16W J	
R8025	NRSA6AJ-472W	MG RESISTOR	4.7kΩ 1/16W J	
R8031	NRSA6AJ-100W	MG RESISTOR	10Ω 1/16W J	
R8032	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
R8033	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R8036	NRSA6AJ-220W	MG RESISTOR	22Ω 1/16W J	
R8041	NRSA6AJ-220W	MG RESISTOR	22Ω 1/16W J	
R8042	NRSA6AJ-220W	MG RESISTOR	22Ω 1/16W J	
R8043	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
R8046	NRSA6AJ-101W	MG RESISTOR	100Ω 1/16W J	
R8050	NRSA6AJ-105W	MG RESISTOR	1MΩ 1/16W J	A,B,C,D
R8050	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	E,F,G,H
R8051	NRSA6AJ-105W	MG RESISTOR	1MΩ 1/16W J	A,B,C,D
R8051	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	E,F,G,H

MODEL	MARK	MODEL	MARK	MODEL	MARK
GR-D270EK	A	GR-D270EZ	D	GR-D290EY	G
GR-D270EX	B	GR-D290EK	E	GR-D290EZ	H
GR-D270EY	C	GR-D290EX	F		

⚠ Symbol No.	Part No.	Part Name	Description	Local
R8052	NRSA6AJ-220W	MG RESISTOR	22Ω 1/16W J	A,B,C,D
R8053	NRSA6AJ-220W	MG RESISTOR	22Ω 1/16W J	A,B,C,D
R8054	NRSA6AJ-105W	MG RESISTOR	1MΩ 1/16W J	A,B,C,D
R8055	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	E,F,G,H
R8056	NRSA6AJ-152W	MG RESISTOR	1.5kΩ 1/16W J	A,B,C,D
R8602	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J	E,F,G,H
R8603	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J	E,F,G,H
R8615	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	E,F,G,H
R8618	NRSA6AJ-105W	MG RESISTOR	1MΩ 1/16W J	E,F,G,H
R8619	NRVA6AD-622W	CMF RESISTOR	6.2kΩ 1/16W D	E,F,G,H
R8621	NRSA6AJ-104W	MG RESISTOR	100kΩ 1/16W J	
R8622	NRSA6AJ-154W	MG RESISTOR	150kΩ 1/16W J	
R8623	NRSA6AJ-104W	MG RESISTOR	100kΩ 1/16W J	E,F,G,H
R8625	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	A,B,C,D
R8626	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	A,B,C,D
RA1001	NRZ0034-473W	NET RESISTOR	47kΩ 1/32W J x4	
RA1003	NRZ0034-104W	NET RESISTOR	100kΩ 1/32W J x4	
RA1004	NRZ0034-104W	NET RESISTOR	100kΩ 1/32W J x4	
RA3001	NRZ0034-100W	NET RESISTOR	10Ω 1/32W J x4	
RA3002	NRZ0034-100W	NET RESISTOR	10Ω 1/32W J x4	
RA3003	NRZ0034-100W	NET RESISTOR	10Ω 1/32W J x4	
RA3004	NRZ0034-100W	NET RESISTOR	10Ω 1/32W J x4	
RA3005	NRZ0034-100W	NET RESISTOR	10Ω 1/32W J x4	E,F,G,H
RA3006	NRZ0034-100W	NET RESISTOR	10Ω 1/32W J x4	E,F,G,H
RA3007	NRZ0034-100W	NET RESISTOR	10Ω 1/32W J x4	
RA3008	NRZ0034-100W	NET RESISTOR	10Ω 1/32W J x4	
RA3009	NRZ0034-100W	NET RESISTOR	10Ω 1/32W J x4	
RA3010	NRZ0034-100W	NET RESISTOR	10Ω 1/32W J x4	
RA3011	NRZ0034-100W	NET RESISTOR	10Ω 1/32W J x4	
RA3012	NRZ0034-103W	NET RESISTOR	10kΩ 1/32W J x4	
RA3201	NRZ0034-100W	NET RESISTOR	10Ω 1/32W J x4	
RA3202	NRZ0034-100W	NET RESISTOR	10Ω 1/32W J x4	
RA8001	NRZ0034-101W	NET RESISTOR	100Ω 1/32W J x4	
RA8002	NRZ0034-101W	NET RESISTOR	100Ω 1/32W J x4	
RA8003	NRZ0034-101W	NET RESISTOR	100Ω 1/32W J x4	
RA8004	NRZ0034-101W	NET RESISTOR	100Ω 1/32W J x4	
RA8005	NRZ0034-103W	NET RESISTOR	10kΩ 1/32W J x4	
RA8601	NRZ0034-103W	NET RESISTOR	10kΩ 1/32W J x4	E,F,G,H
RA8602	NRZ0034-103W	NET RESISTOR	10kΩ 1/32W J x4	E,F,G,H
RA8605	NRZ0034-0R0W	NET RESISTOR	0Ω 1/32W J x4	E,F,G,H
RA8606	NRZ0034-0R0W	NET RESISTOR	0Ω 1/32W J x4	E,F,G,H
L1001	NQL402M-100X	COIL	10uH M	
L1002	NQL402M-100X	COIL	10uH M	
L2401	NQL402M-100X	COIL	10uH M	
L2402	NQL402M-100X	COIL	10uH M	
L2601	NQR0269-013X	FERRITE BEADS		
L2602	NQR0269-013X	FERRITE BEADS		
L2603	NQR0269-013X	FERRITE BEADS		
L2651	NQR0269-013X	FERRITE BEADS		
L2652	NQR0269-013X	FERRITE BEADS		
L2653	NQR0269-013X	FERRITE BEADS		
L3001	NQL38DK-100X	P COIL	10uH K	
L3002	NQR0006-001X	FERRITE BEADS		
L3003	NQR0006-001X	FERRITE BEADS		
L3004	NQL38DK-100X	P COIL	10uH K	
L3005	NQR0006-001X	FERRITE BEADS		
L3007	NQR0006-001X	FERRITE BEADS		
L3008	NQL38DK-100X	P COIL	10uH K	
L3009	NQR0006-001X	FERRITE BEADS		
L3010	NQL085J-120X	COIL	12uH J	
L3012	NQL085J-2R2X	COIL	2.2uH J	
L3201	NQR0129-002X	FERRITE BEADS		
L3202	NQR0129-002X	FERRITE BEADS		
L3203	NQR0006-001X	FERRITE BEADS		
L3204	NQL38DK-100X	P COIL	10uH K	
L3701	NQL38DK-100X	P COIL	10uH K	
L3731	NQL085J-6R8X	COIL	6.8uH J	
L3732	NQL085J-6R8X	COIL	6.8uH J	
L4201	NQR0129-002X	FERRITE BEADS		
L4901	NQR0129-002X	FERRITE BEADS		
L4902	NQL38DK-100X	P COIL	10uH K	
L4953	NQR0129-002X	FERRITE BEADS		
L4954	NQL38DK-100X	P COIL	10uH K	
L4955	NQL38DK-100X	P COIL	10uH K	
L5501	NQL38DK-100X	P COIL	10uH K	
L5502	NQR0129-002X	FERRITE BEADS		
L5503	NQR0129-002X	FERRITE BEADS		
L5504	NQR0129-002X	FERRITE BEADS		
L5505	NQL315K-100X	COIL	10uH K	
L5506	NQL315K-100X	COIL	10uH K	
L6101	NQL87EN-390X	COIL	39uH N	
L6201	NQL87EN-390X	COIL	39uH N	
L6301	NQLZ012-470X	COIL	47uH	
L6401	NQLZ012-470X	COIL	47uH	
L6501	NQL52EM-221X	COIL	220uH M	
L6502	NQL38DK-100X	P COIL	10uH K	
L6701	NQL52EM-390X	COIL	39uH M	
L6702	NQL79GM-220X	COIL	22uH M	
L6801	NQL79GM-470X	COIL	47uH M	
L7702	NQL38DK-220X	P COIL	22uH K	
L7703	NQL38DK-220X	P COIL	22uH K	
L7704	NQL38DK-220X	P COIL	22uH K	
L7801	NQL04DK-220X	COIL	22uH K	
L7802	NQL382M-220X	COIL	22uH M	
L8001	NQR0129-002X	FERRITE BEADS		
L8002	NQR0129-002X	FERRITE BEADS		
L8003	NQR0129-002X	FERRITE BEADS		
L8005	NQR0129-002X	FERRITE BEADS		
L8006	NQR0006-001X	FERRITE BEADS		
L8007	NQR0129-002X	FERRITE BEADS		
L8008	NQL402M-100X	COIL	10uH M	A,B,C,D
L8601	NQR0129-002X	FERRITE BEADS		
L8602	NQR0129-002X	FERRITE BEADS		E,F,G,H
L8603	NQR0006-001X	FERRITE BEADS		E,F,G,H
L8604	NQR0006-001X	FERRITE BEADS		E,F,G,H
L8606	NQL402M-100X	COIL	10uH M	E,F,G,H
L8607	NQR0129-002X	FERRITE BEADS		E,F,G,H
L8610	NQR0536-001X	CHOKE COIL		
CN101	QGF0545F1-20X	CONNECTOR	FFC/FPC (1-20)	
CN102	QGF0545F1-24X	CONNECTOR	FFC/FPC (1-24)	
CN103	QGF0545F1-17X	CONNECTOR	FFC/FPC (1-17)	
CN104	QGF0528F1-40X	CONNECTOR	PRE/MDA FFC/FPC (1-40)	
CN105	QGF0528F1-40X	CONNECTOR	PRE/MDA FFC/FPC (1-40)	
CN107	QGF0528F1-40X	CONNECTOR	JACK/DC FFC/FPC (1-40)	
CN108	QGF0543F1-16X	CONNECTOR	VF PWB FFC/FPC (1-16)	
CN109	QGF0545F1-12X	CONNECTOR	FFC/FPC (1-12)	
CN110	QGF0545F1-26X	CONNECTOR	FFC/FPC (1-26)	
CN111	QGF0543F1-12X	CONNECTOR	SD PWB FFC/FPC (1-12)	
CN112	QGA1001F1-02X	CONNECTOR	SPEAKER W-B (1-2)	
CN113	QGB0519J1-40X	CONNECTOR	JIG CN B-B (1-40)	
CN114	QGA1001F1-04X	CONNECTOR	MIC W-B (1-4)	
⚠ F6001	NMFZ007-2R5X-K	FUSE	2.5A 24V	
J101	QNZ0497-001	USB(B) CONNECTOR	USB USB(MINI-B)	
X1001	NAX0645-001X	CRYSTAL		
X1002	NAX0564-001X	CRYSTAL	32.768kHz	
X5501	NAX0587-001X	CXO	54.0000MHz	
X8001	NAX0398-001X	C OSCILLATOR		A,B,C,D
X8601	NAX0713-001X	CRYSTAL		E,F,G,H
WR1	WJT0176-001A	E-CARD WIRE	MAI-PRE/MD(x2)	

CCD BOARD ASSEMBLY <02>

⚠ Symbol No.	Part No.	Part Name	Description	Local
PW1	LYA20013-01B	CCD BOARD ASSY		
Q5001	2SC3931/CD/-X	TRANSISTOR		
Q5002	2SC4081/QR/-X	TRANSISTOR		
Q5002 or	BC847BW-X	TRANSISTOR		
C5001	NBP41EM-475X-B	TA E CAPACITOR	4.7uF 25V M	
C5002	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C5003	NBP21CM-106X	TA E CAPACITOR	10uF 16V M	
C5004	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C5005	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C5006	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C5007	NCB31EK-222X	C CAPACITOR	2200pF 25V K	
R5001	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	
R5002	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	
L5001	NQL315K-100X	COIL	10uH K	

MODEL	MARK	MODEL	MARK	MODEL	MARK
GR-D270EK	A	GR-D270EZ	D	GR-D290EY	G
GR-D270EX	B	GR-D290EK	E	GR-D290EZ	H
GR-D270EY	C	GR-D290EX	F		

⚠ Symbol No.	Part No.	Part Name	Description	Local
L5002	NQL315K-100X	COIL	10uH K	

PRE/MDA BOARD ASSEMBLY <03>

⚠ Symbol No.	Part No.	Part Name	Description	Local
PW1	LYA10017-01B	PRE/MDA BOARD ASSY		
IC1601	BD6637KV	IC	MDA 64PIN	
IC1701	BA10358FVM-W	IC	REELAMP5V	
IC1702	LM393DR-X	IC	REELSMT	
IC3501	JCY0132	IC		
Q1601	UMC3N-W	DIGI TRANSISTOR	LD ON	
D1603	DAP222-X	DIODE ARRAY	LD ON	
D1603 or	MA132WA-X	SI DIODE		
C1601	NCB31EK-103X	C CAPACITOR	0.01uF 25V K	
C1602	NBE20JM-106X	TA E CAPACITOR	10uF 6.3V M	
C1603	NBE20JM-106X	TA E CAPACITOR	10uF 6.3V M	
C1605	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C1606	NCB31HK-152X	C CAPACITOR	1500pF 50V K	
C1607	NCB31CK-473X	C CAPACITOR	0.047uF 16V K	
C1614	NBE21AM-106X	TA E CAPACITOR	10uF 10V M	
C1618	NCB31HK-222X	C CAPACITOR	2200pF 50V K	
C1619	NCB31HK-222X	C CAPACITOR	2200pF 50V K	
C1620	NCB31HK-222X	C CAPACITOR	2200pF 50V K	
C1621	NCB30JK-105X	C CAPACITOR	1uF 6.3V K	
C1622	NCB31CK-223X	C CAPACITOR	0.022uF 16V K	
C1623	NCB31CK-473X	C CAPACITOR	0.047uF 16V K	
C1624	NCB31EK-103X	C CAPACITOR	0.01uF 25V K	
C1625	NDC31HJ-101X	C CAPACITOR	100pF 50V J	
C1626	NCB31HK-472X	C CAPACITOR	4700pF 50V K	
C1627	NCB31HK-472X	C CAPACITOR	4700pF 50V K	
C1628	NCB21CK-224X	C CAPACITOR	0.22uF 16V K	
C1629	NCB21EK-224X	C CAPACITOR	0.22uF 25V K	
C1630	NCB21EK-224X	C CAPACITOR	0.22uF 25V K	
C1631	NBE20JM-106X	TA E CAPACITOR	10uF 6.3V M	
C1632	NCB21CK-474X	C CAPACITOR	0.47uF 16V K	
C1633	NCB21CK-474X	C CAPACITOR	0.47uF 16V K	
C1701	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C1702	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C3501	NBE20JM-106X	TA E CAPACITOR	10uF 6.3V M	
C3502	NBE20JM-106X	TA E CAPACITOR	10uF 6.3V M	
C3503	NBE20JM-106X	TA E CAPACITOR	10uF 6.3V M	
C3504	NCB31CK-473X	C CAPACITOR	0.047uF 16V K	
C3505	NCB31CK-223X	C CAPACITOR	0.022uF 16V K	
C3506	NCB21AK-105X	C CAPACITOR	1uF 10V K	
C3507	NCB31EK-103X	C CAPACITOR	0.01uF 25V K	
C3508	NCB31EK-103X	C CAPACITOR	0.01uF 25V K	
C3509	NCB31EK-103X	C CAPACITOR	0.01uF 25V K	
C3510	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C3511	NCB31EK-103X	C CAPACITOR	0.01uF 25V K	
C3512	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C3513	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C3514	NCB31CK-473X	C CAPACITOR	0.047uF 16V K	
C3515	NCB31CK-473X	C CAPACITOR	0.047uF 16V K	
C3516	NCB31CK-473X	C CAPACITOR	0.047uF 16V K	
C3517	NCB31EK-103X	C CAPACITOR	0.01uF 25V K	
C3518	NCB31EK-103X	C CAPACITOR	0.01uF 25V K	
C3519	NCB31HK-102X	C CAPACITOR	1000pF 50V K	
C3520	NCB31EK-103X	C CAPACITOR	0.01uF 25V K	
C3521	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C3522	NCB20JM-475X	C CAPACITOR	4.7uF 6.3V M	
C3523	NCB31EK-103X	C CAPACITOR	0.01uF 25V K	
C3524	NCB31EK-103X	C CAPACITOR	0.01uF 25V K	
C3525	NCB20JM-475X	C CAPACITOR	4.7uF 6.3V M	
C3526	NCB31EK-103X	C CAPACITOR	0.01uF 25V K	
C3527	NDC31HJ-221X	C CAPACITOR	220pF 50V J	
R1601	NRSA63J-681X	MG RESISTOR	680Ω 1/16W J	
R1602	NRSA63J-124X	MG RESISTOR	120kΩ 1/16W J	
R1603	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	
R1604	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J	
R1610	NRSA63J-391X	MG RESISTOR	390Ω 1/16W J	
R1611	NRSA63J-391X	MG RESISTOR	390Ω 1/16W J	
R1612	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J	
R1613	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R1614	NRZ0072-R330X	MG RESISTOR	0.33Ω 1/4W F	
R1616	NRSA63D-392X	MG RESISTOR	3.9kΩ 1/16W D	
R1617	NRZ0072-R330X	MG RESISTOR	0.33Ω 1/4W F	
R1620	NRSA63J-683X	MG RESISTOR	68kΩ 1/16W J	
R1621	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R1622	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R1624	NRSA63D-183X	MG RESISTOR	18kΩ 1/16W D	
R1625	NRSA63D-681X	MG RESISTOR	680Ω 1/16W D	
R1629	NRSA63J-564X	MG RESISTOR	560kΩ 1/16W J	
R1635	NRSA63J-332X	MG RESISTOR	3.3kΩ 1/16W J	
R1636	NRSA63J-123X	MG RESISTOR	12kΩ 1/16W J	
R1637	NRSA63J-154X	MG RESISTOR	150kΩ 1/16W J	
R1701	NRSA63J-823X	MG RESISTOR	82kΩ 1/16W J	
R1702	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R1703	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R1704	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R1705	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R1706	NRSA63J-823X	MG RESISTOR	82kΩ 1/16W J	
R1707	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R1708	NRSA63J-124X	MG RESISTOR	120kΩ 1/16W J	
R1709	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R1710	NRSA63J-124X	MG RESISTOR	120kΩ 1/16W J	
R1711	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R1712	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R3501	NRSA63J-471X	MG RESISTOR	470Ω 1/16W J	
R3502	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J	
R3503	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R3504	NRSA63D-241X	MG RESISTOR	240Ω 1/16W D	
R3505	NRSA63D-241X	MG RESISTOR	240Ω 1/16W D	
R3506	NRSA63D-241X	MG RESISTOR	240Ω 1/16W D	
R3507	NRSA63D-241X	MG RESISTOR	240Ω 1/16W D	
R3508	NRSA63J-223X	MG RESISTOR	22kΩ 1/16W J	
R3512	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
L1601	NQL382M-100X	COIL	10uH M	
L1602	NRSA02J-0R0X	MG RESISTOR	0Ω 1/10W J	
L3501	NQR0006-001X	FERRITE BEADS		
L3502	NQL402M-100X	COIL	10uH M	
L3503	NQR0006-001X	FERRITE BEADS		
L3504	NQR0006-001X	FERRITE BEADS		
L3505	NQR0006-001X	FERRITE BEADS		
CN401	QGF0508F1-40X	CONNECTOR	MAIN1(PRE) FFC/FPC (1-40)	
CN402	QGF0520F1-08X	CONNECTOR	HEAD FFC/FPC (1-8)	
CN403	QGF0505F2-06X	CONNECTOR	LOADING FFC/FPC (1-6)	
CN404	QGF0534F1-11X	CONNECTOR	DRUM FFC/FPC (1-11)	
CN405	QGF0534F1-18X	CONNECTOR	CAPSTAN FFC/FPC (1-18)	
CN406	QGF0505F2-16X	CONNECTOR	SENSOR FFC/FPC (1-16)	
CN407	QGF0508F1-06X	CONNECTOR	ROT E SW FFC/FPC (1-6)	
CN408	QGF0508F1-40X	CONNECTOR	MAIN2(MDA) FFC/FPC (1-40)	
⚠ F1601	NMFZ007-R20X-K	FUSE	0.2A 50V	
⚠ F1602	NMFZ007-R50X-K	FUSE	0.5A 50V	
SD1	LY34573-001A	SHIELD CASE(PR)	PRE S-CASE	

OPE BOARD ASSEMBLY <04>

⚠ Symbol No.	Part No.	Part Name	Description	Local
PW2	LYA10019-01B2	OPE BOARD ASSY		
R302	NRSA63J-332X	MG RESISTOR	3.3kΩ 1/16W J	
R303	NRSA63J-682X	MG RESISTOR	6.8kΩ 1/16W J	
R304	NRSA63J-223X	MG RESISTOR	22kΩ 1/16W J	
CN301	QGF0545F1-26X	CONNECTOR	FFC/FPC (1-26)	
CN302	QGF0517F2-20X	CONNECTOR	(MONITOR) FFC/FPC (1-20)	
S301	NSW0198-001X	TACT SWITCH	(MENU)	
S302	NSW0198-001X	TACT SWITCH	(PLAY)	
S303	NSW0198-001X	TACT SWITCH	(LIGHT)	
S304	NSW0198-001X	TACT SWITCH	(REW)	
S305	NSW0198-001X	TACT SWITCH	(STOP)	
S306	NSW0198-001X	TACT SWITCH	(FF)	
OT1	LY30034-0P2A	SPACER(A)	(x3)	

MODEL	MARK	MODEL	MARK	MODEL	MARK
GR-D270EK	A	GR-D270EZ	D	GR-D290EY	G
GR-D270EX	B	GR-D290EK	E	GR-D290EZ	H
GR-D270EY	C	GR-D290EX	F		

SD BOARD ASSEMBLY <05>

⚠ Symbol No.	Part No.	Part Name	Description	Local
PW1	LYA10018-01C	SD BOARD ASSY		
D901	EMZ6.8N-X	Z DIODE		
C901	NCB31CK-103X	C CAPACITOR	0.01uF 16V K	
C902	NBZ0015-106X	TA E CAPACITOR	10uF 6.3V M	
R901	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R902	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R903	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R904	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R905	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R906	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R907	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R908	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
L901	NQR0006-001X	FERRITE BEADS		
CN901	QGF0517F2-12X	CONNECTOR	FFC/FPC (1-12)	
CN902	NNZ0058-001X	SD CARD CONNE		
S901	NSW0099-001X	SLIDE SWITCH		
WR1	WJT0175-001B	E-CARD WIRE		

MONITOR BOARD ASSEMBLY <06>

⚠ Symbol No.	Part No.	Part Name	Description	Local
PW1	LYA10019-02B1	MONITOR BOARD ASSY		
IC7601	DN8797MS-X	IC		
Q7501	DTC144EE-X	DIGI TRANSISTOR		
Q7501 or	BCR148T-X	DIGI TRANSISTOR		
Q7501 or	UN9213J-X	DIGI TRANSISTOR		
Q7501 or	PDTC144EE-X	DIGI TRANSISTOR		
Q7502	DTA144EE-X	DIGI TRANSISTOR		
Q7502 or	BCR198T-X	DIGI TRANSISTOR		
Q7502 or	UN9113J-X	DIGI TRANSISTOR		
Q7502 or	PDTA144EE-X	DIGI TRANSISTOR		
Q7503	2SD1664/QR/-W	TRANSISTOR		
Q7504	2SD1664/QR/-W	TRANSISTOR		
D7602	RB521S-30-X	SB DIODE		
D7603	RB521S-30-X	SB DIODE		
D7604	RB521S-30-X	SB DIODE		
D7605	RB521S-30-X	SB DIODE		
C7501	NCB10JK-106X	C CAPACITOR	10uF 6.3V K	
C7502	NCB21HK-183X	C CAPACITOR	0.018uF 50V K	
C7504	NCZ1016-150X	C CAPACITOR	15pF 2kV J	
C7505	NCZ1016-150X	C CAPACITOR	15pF 2kV J	
C7602	NCB10JK-106X	C CAPACITOR	10uF 6.3V K	
C7603	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C7604	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C7605	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C7606	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C7607	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C7608	NCB11EK-105X	C CAPACITOR	1uF 25V K	
C7609	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C7610	NCB11EK-105X	C CAPACITOR	1uF 25V K	
C7611	NCB11EK-105X	C CAPACITOR	1uF 25V K	
C7612	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C7613	NCB31EK-153X	C CAPACITOR	0.015uF 25V K	
C7614	NCB31CK-224X	C CAPACITOR	0.22uF 16V K	
C7615	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
R7502	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R7503	NRSA63J-182X	MG RESISTOR	1.8kΩ 1/16W J	
R7601	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R7603	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R7605	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R7606	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R7607	NRSA63D-223X	MG RESISTOR	22kΩ 1/16W D	
R7608	NRSA63J-106X	MG RESISTOR	10MΩ 1/16W J	
R7609	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J	
R7610	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
L7502	NQLZ010-680X	COIL	68uH	
L7602	NQL38DK-101X	P COIL	100uH K	
T7501	NQS0060-001X	SW TARNSF		
CN7601	QGF0545F1-20X	CONNECTOR	FFC/FPC (1-20)	
CN7602	QGF0528F1-40X	CONNECTOR	LCD FFC/FPC (1-40)	
⚠ F7501	NMFZ007-R40X-K	FUSE	0.4A 50V	
OT1	QAL0396-001	FPC		

FRONT BOARD ASSEMBLY <07>

⚠ Symbol No.	Part No.	Part Name	Description	Local
PW1	LYA10020-03B	FRONT BOARD ASSY		
IC701	RPM7138-SV4	IR DETECT UNIT	IR_SENSOR	
Q701	RPM-22PB	PHOTO TRANSISTOR	W/B	
Q702	BC847PN-X	PAIR TRANSISTOR		
Q703	BC847PN-X	PAIR TRANSISTOR		
Q704	2SC4617/RS/-X	TRANSISTOR		
D701	UDZS6.8B-X	Z DIODE		
D702	NSPW500BS/CRS/	LED		
D703	NSPW500BS/CRS/	LED		
C701	NBE20JM-106X	TA E CAPACITOR	10uF 6.3V M	
C702	NBE20JM-106X	TA E CAPACITOR	10uF 6.3V M	
C705	NCB31HK-102X	C CAPACITOR	1000pF 50V K	
C706	NCB31HK-102X	C CAPACITOR	1000pF 50V K	
R701	NRSA63J-152X	MG RESISTOR	1.5kΩ 1/16W J	
R702	NRSA63J-470X	MG RESISTOR	47Ω 1/16W J	
R703	NRSA63J-391X	MG RESISTOR	390Ω 1/16W J	
R704	NRSA63J-182X	MG RESISTOR	1.8kΩ 1/16W J	
R705	NRSA63J-152X	MG RESISTOR	1.5kΩ 1/16W J	
R706	NRSA63J-270X	MG RESISTOR	27Ω 1/16W J	
R707	NRSA63J-152X	MG RESISTOR	1.5kΩ 1/16W J	
R708	NRSA63J-270X	MG RESISTOR	27Ω 1/16W J	
R709	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R710	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
L701	NQR0265-001X	FERRITE BEADS		
L702	NQR0269-013X	FERRITE BEADS		
L703	NQR0269-013X	FERRITE BEADS		
⚠ BT701	QAB0050-001	LITHIUM BATTERY	CR2032/H1G 3V 220mAh	
CN701	QGF0543F1-17X	CONNECTOR	FFC/FPC (1-17)	
J701	QNS0147-001	3.5 JACK	EXT MIC	
S701	NSW0221-001X	DETECT SWITCH	EJECT SW	
S702	NSW0252-001	DETECT SWITCH	MONI_SW	
WR1	QUQ105-1703AA-E	FFC WIRE	17pin 3cm	

VF BOARD ASSEMBLY <08>

⚠ Symbol No.	Part No.	Part Name	Description	Local
PW1	LYA20014-01B	VF BOARD ASSY		
Q7001	2SC4617/QR/-X	TRANSISTOR		
Q7001 or	2SC4738/YG/-X	TRANSISTOR		
Q7001 or	2SD2216J/QR/-X	TRANSISTOR		
Q7001 or	BC847BT-X	TRANSISTOR		
D7001	E1S35AW0C501-X	LED		
C7001	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C7002	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C7003	NDC31HJ-101X	C CAPACITOR	100pF 50V J	

MODEL	MARK	MODEL	MARK	MODEL	MARK
GR-D270EK	A	GR-D270EZ	D	GR-D290EY	G
GR-D270EX	B	GR-D290EK	E	GR-D290EZ	H
GR-D270EY	C	GR-D290EX	F		

⚠ Symbol No.	Part No.	Part Name	Description	Local
C7004	NDC31HJ-101X	C CAPACITOR	100pF 50V J	
R7001	NRSA63D-682X	MG RESISTOR	6.8kΩ 1/16W D	
R7002	NRSA63D-272X	MG RESISTOR	2.7kΩ 1/16W D	
R7003	NRSA63D-820X	MG RESISTOR	82Ω 1/16W D	
R7004	NRSA63D-273X	MG RESISTOR	27kΩ 1/16W D	
R7005	NRSA63D-563X	MG RESISTOR	56kΩ 1/16W D	
R7006	NRSA63D-163X	MG RESISTOR	16kΩ 1/16W D	
R7007	NRSA63D-472X	MG RESISTOR	4.7kΩ 1/16W D	
R7008	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R7009	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
CN7001	QGF0545F1-14X	CONNECTOR	FFC/FPC (1-14)	
CN7002	QGF0530F3-15W	CONNECTOR	LCD FFC/FPC (1-15)	